

From Chambers' Papers for the People.

## THE MICROSCOPE AND ITS MARVELS.

It has been said derisively, and said too we believe by a poet, that man's eyes and reason were given him for a different purpose than to study flies. The good-natured "Spectator," sharing in the same spirit, speaks of microscopical observers as constituting in the main a body of patientless doctors, who for want of a better occupation gave themselves up to this and similar studies. "There are," says the writer of No. 21, "innumerable retainers to physic, who, for want of other patients, amuse themselves with the stifling of cats in an air-pump, cutting up dogs alive, or impaling of insects upon the point of needles for microscopic observations." And Pope, in the following lines, appears to consider the inspection of mites as the most unworthy of employments for a being who had the face of heaven whereon to exercise his vision:—

Why has not man a microscopic eye?

For this plain reason—man is not a fly.

Say, what the use, were finer optics given,

T' inspect a mite—not comprehend the heaven?

It is very true that for man to be endowed with microscopic vision would be a curse instead of a blessing; but it is also true that he who desires to extend his knowledge of the Creator of the heavens may both usefully and profitably employ himself even in the inspection of a mite, and that he can draw from the minutest objects around him arguments of power and wisdom equalling those of the philosopher whose studies penetrate almost into the outer boundaries of the universe. It is certainly a remarkable fact in the history of natural science, that those studies which had reference to the minuter portions of the creation of which we form a part have often and long been held up to general ridicule, as though there were something akin to insanity in their prosecution. The science of entomology, dealing, as it chiefly does, with small objects—with mites, atomies, and flies—shared largely in this not overwise sort of persecution. A certain noble personage (Lady Granville) was accounted a confirmed lunatic in consequence of her devotion to this science, and an attempt to set aside her will was made upon this ground alone. The great naturalist Ray appeared as a witness to her sanity. The revelations of the microscope had no charm for those who laughed at the minute philosophers, and a general discredit long overhung the entire range of natural science relating exclusively to things unseen by the unaided eye. Yet it is deserving of remark, that all objects created by the skill of man of an unusually minute size were at this very time held in higher esteem than perhaps at any former or subsequent period of history. If we would see men packing art into a nut-shell, and rejoicing in the tiniest mechanisms which years of toil enabled them to produce, we must look into the annals of the time when the study of the minute things of nature underwent a perpetual charge of folly, and lay under obloquy and contempt. The same persons who were enchanted with an "Æneid" in a walnut, or a watch in a ring, had no taste for

what the microscope taught them of the wonders of the world of little things which floats around us. At the time that public curiosity considered minute organisms too despicable to demand its notice, men of science beheld in them a microcosm of new marvels—a world overlying, underlying, interpenetrating the great tangible world of things which men see, touch, and taste. At the same time also that the despisers of small things were perplexed at the stupendous destructions which visited their crops, their orchards and stores, men of microscopical expertness beheld the cause itself in the tiny insect, or still more minute fungus, whose rapid propagation exhibited, in the effects produced, the importance of things thought to be insignificant. It is a striking, and in truth a humbling fact, that few of the great phenomena of nature are produced by great and visible causes. The white sea-wall of the southern coast of our island is not an aggregation of the remains of vast, but of the most minute and insignificant beings. The limestone rocks, which form no small part of our planet's crust, were the result of organic agencies—were never formed by creatures so great as an elephant—nay, even so large as a bird—but of little atomies which would perish by hundreds under the foot-tread of a man. The same is true of the rocks of coral—the masonry, not of the great leviathan of the deep, but of a humble animal of the minutest size. Humble, mean, even microscopic, are those beings honored of God in the construction of so large a portion of our solid earth. By the agency of animalcules and infusoria he has done a work of inconceivable vastness and extent. Yet the science which reveals to us these facts is that which, in common with the things of which it deals, has been the subject of so much contempt and neglect at the hands of men. The world has to learn, and in our day it is only beginning to be taught the fact, that the microscopic life which teems in the ocean, on the land, and in the air, plays a far higher and more important part in the economy of creation than has hitherto been assigned to it. And science is hourly instructing us in a lesson to which we are singularly averse—that those things which seem to us great and notable in the operations of nature, are immeasurably surpassed in force and extent by those which, without the microscope, cannot be seen at all, at least in their individual states. Cowley tells us, "I love littleness almost in all things—a little convenient estate, a little cheerful house, a little company, and a very little feast!" But the microscopical observer loves littleness, because, without a paradox, it is in its combined state the source and even the cause of the greatest phenomena in the visible world, and because it reveals to him the evidence of that Creative Power before whom great and small are terms without meaning. The French writer's seeming paradox is one which is full of deep meaning and truthful application. "If," says he, "the Author of Nature is great in great things, he is exceeding great in small ones."

Roger Bacon, to whom are attributed so many discoveries affecting the present position of science, and the welfare of mankind, is held by some to be

the inventor of this valuable and now important instrument—the microscope. Whilst at Oxford, he is said to have constructed a glass which exhibited such curious things, as to have gained for him the unenviable reputation of dealing with supernatural agencies. By others it is attributed to Jansen, a spectacle-maker of Holland. One of the instruments made by this optician came into possession of Cornelius Dubbel, mathematician to King James II., who immediately began to make similar ones, and called the invention his own. A microscope at this date had the following rather extraordinary dimensions:—It was six feet long, one inch in diameter, consisting of a gilt copper tube, supported on brass pillars, the base being ebony, and embellished with a couple of dolphins! It was, in fact, a transmogrified telescope. Galileo seems to have deserved, but has somehow missed, the honor of being considered the inventor of the microscope. Hooke was among the earliest and best English microscopical observers. At the request of the Royal Society he published a curious folio volume entitled “Micrographia, or some Physiological Descriptions of Minute Bodies made by Magnifying Glasses.” The reader will feel interested to learn one of the first-recorded “observations” made by the microscope in his hands. He observes that as the geometriician begins with a point, so it seemed natural for him likewise—and accordingly he began *with the point of a needle*. This interesting object is engraved for the satisfaction of the curious. Hooke appears first to have perceived the vast difference which this instrument reveals to us between the works of man and those of God; and he shows in a clear and satisfactory manner that works of art, however exquisite, when examined by an organ more acute than that by help of which they were made, disclose to us the fact, that the more we see of their shape, the less beautiful they appear; whereas, in the works of nature, the deepest discoveries reveal the greatest excellencies. Hooke becomes very facetious over the edge of a razor as seen under his microscope, and the whole of observation second is occupied therewith. The rest of the volume deals with some more scientific topics; and the excellent plates which embellish it doubtless must have impressed the minds of the learned with the fact, that an instrument was now in process of being applied to science which promised to unlock many of her hidden treasures. In Hooke’s time one Divini, of Rome, made what may be appropriately called a huge microscope! It was nearly a foot and a half long, was as thick as a man’s thigh, and had an eye-glass as large as the palm of the hand! Subsequently Leeuwenhoek gave a new impulse to microscopical study by his magnificent discoveries. He used small double-convex lenses which he made himself. Each of his microscopes was adapted only to one or two objects. They were made of silver, and he possessed some hundreds of them. He bequeathed a quarter of a hundred to the Royal Society. Sir Isaac Newton exercised his powerful mind upon the perfecting of this instrument, and is said to have invented a compound reflecting microscope, which he recommended to be used with a single-colored light—such as yellow. While attention was thus kept upon the subject, a curious little fact was dropped upon by a Mr. Gray: he found that a drop of water, placed over a hole in a piece of brass, instantly assumed and maintained the spherical form, and thus constituted an excellent lens! Water-microscopes were now employed. This

discovery has lived to the present time, and books on popular science not unfrequently mention the fact.

In 1738, Dr. Nathaniel Lieberkuhn, of Berlin, invented the solar microscope. This was an apparatus which for a time excited great attention; but subsequently it was found to be inapplicable to the purposes of observers in microscopical evidence. Great wonder and astonishment were created at the exhibition in London of the magnified images of objects projected upon a screen of paper, and the microscope was thus for the first time made a means of displaying, to a large number of observers at once, the hidden wonders of the little things around them. Lieberkuhn also invented the concave silver speculum, which is still employed for the inspection of opaque objects, and is known by its illustrious discoverer’s name. Simple and compound microscopes became subsequently extremely common, and they were generally supplied with a set of little objects in ivory slides, which formed the chief part of the microscopist’s study and exhibition in those days. “He who could exhibit these objects well,” says M. Quekett, “was considered a proficient in the art.” The microscope was still in its non-achromatized state, and when used in the compound form, a prismatic halo was seen to surround every object seen through it. The simple microscope, in which this defect was imperceptible, was consequently chiefly used, though with a great loss of light, in consequence of the very small diameter of the lenses employed, and the shortness of their foci. To remedy this, precious stones were employed to form lenses. The diamond, from its peculiar properties with respect to light, appeared specially applicable for this purpose, but the labor of grinding it was immense. Mr. Pritchard had the annoying misfortune of having nearly completed a minute lens out of a brilliant, when it disappeared, and could nowhere be found. A rose-diamond was then selected, and the labor commenced anew, and this time with a successful issue—the patient operator having, after prolonged toil, the satisfaction of being the first to look through a diamond microscope. Lenses of garnet and other precious stones were subsequently made, and the results were highly satisfactory; but the labor and expense incurred in their manufacture proves an insuperable barrier to the employment of such materials in the advancement of microscopical science. Fortunately the invention of the compound achromatic instrument supplies at once a vastly superior microscope, and at a cheaper rate. Among other important matters relating to microscopic instruments, the invention of what are called doublets deserves to be specially noticed. As improved by Wallaston, this instrument, or one substantially similar, forms one of the most powerful combinations at present in use, next to the compound achromatic microscope itself.

The introduction of the principle of achromatism in the construction of microscopes forms so important a part in the history of the science, that we are justified in a simple endeavor to explain what is meant by this term, which is now coming into general use. The rays of light, when collected by a lens, and transmitted through it, are differently affected in their passage through the glass. Some are more, some less, bent out of their course than others: consequently all the rays of light are not brought to one and the same focus. Those which pass through the outer edges of the lens are much

more bent aside, and brought to a nearer focus, than those passing through its centre. This defect is called spherical aberration. But there is another and not less important defect, which has received the designation chromatic aberration, and the correction of which, no less than that of the former, was an essential element in the construction of a perfect microscope. By chromatic aberration is implied that difference in the refrangibility of the different prismatic rays, or colored rays, which causes some of them to come to one focus, and some to another. If all united in a common focus, after passing through a lens or combination of lenses, the colors would not be seen, and the light would be perfectly white. On this principle the construction of what is termed an achromatic lens depends. It is an optical arrangement of glasses, which unites into a common focus those primary rays of red, blue, and yellow, which, when combined, and mixed in certain proportions, constitute white light. The defect of spherical aberration is overcome by a combination of two lenses of different forms. But the defect of chromatic aberration is overcome by a combination of lenses of a different density, and consequently exercising different properties over light transmitted through their substance. In the construction of the achromatic lens glass of different kinds is used. One lens is of crown-glass, which has a comparatively low refractive and dispersive power over the rays of light; the other is of flint-glass, which has a higher refractive and dispersive power than crown-glass. These lenses are consequently capable of correcting each other, if we may so speak; and the result is, that a perfectly white light is perceived through them. When not only the chromatic, but the spherical aberration of the rays is to be corrected, two or three lenses are employed. The following description of the state of the compound microscope, prior to the introduction of these improvements, will give an idea of its imperfections, and of its total inapplicability to the purposes of science:—"The image formed by the object-glass," says Mr. Ross, "was not a simple one, but made up of an infinite number of variously-colored and variously-sized images. Those nearest the object-glass would be blue, and those nearest the eye-glass would be red—the effect of this being the production of so much confusion, that the instrument was reduced to a mere toy, although these errors were diminished to the utmost possible extent by limiting the aperture of the object-glass, and thus restricting the angle of the pencil of light from each point of the object. But this proceeding made the picture so obscure, that, on the whole, the best compound instruments were inferior to the simple microscopes having a single lens, with which, indeed, almost all the more important observations of the preceding century were made." The application, however, of the principles of constructing an achromatic lens was an extremely difficult undertaking, and long defied the skill of many of the most eminent in science. The extreme smallness of the lenses formed one of the chief difficulties. "When it is considered," says Dr. Carpenter, "that in the highest powers now made, the largest of three pairs of lenses is very little larger than a pin's head, and the smallest is much smaller than a pin's head, we can easily understand the difficulty of producing the required achromatic corrections in these cases, and admire the marvellous mechanical skill and precision of hand, as well as correct knowledge of the maker, to produce the perfect correction required. The aperture of

one sixteenth of an inch is not more than would be made by the prick of a small pin, and yet through that small hole the most perfectly distinct and beautiful images could be produced, which reveal the most extraordinary structures in bodies that were previously considered to present no mark or indication of structure whatever. A compound achromatic microscope, as now constructed by the best makers, consists, so far as the optical part of the apparatus is concerned, essentially of a reflecting mirror, of the object-glasses or magnifying powers, and of the eye-pieces. Each eye-piece consists of two plano-convex lenses, placed at a distance from each other equal to half the sum of their focal lengths. The lens next the eye of the observer is called the eye-glass, whilst that the most distant is called the field-glass. The field-glass contracts the size of the picture, by bringing together the rays of light, and so enables a larger part of it to be seen at once than would otherwise have been the case. The best achromatic object-glasses consist of two or three compound lenses, which are fixed in a separate tube. An idea of the amount of labor, skill, and care requisite in the construction of this small but vital part of the apparatus may be formed from the fact, that the highest-power object-glass is sold at about 12*l.*; and six or seven object-glasses of lower powers, and consequently somewhat lower cost, are the adjuncts of every first-rate instrument. From 60*l.* to 70*l.* sterling is the value of a first-rate compound achromatic microscope, supplied with its necessary accessory apparatus."

It is time our attention were now directed to the application of this beautiful and perfect instrument to the revelations of the minute and invisible worlds of life which surround us, and which populate alike the thin air, the waters, and the dry land. In attempting to furnish a sketch of what the microscope has disclosed to us concerning the minute world of organic life, which we have spoken of as interpenetrating, overlying, and surrounding the larger world of visible and tangible organization, and also its revelations of the minute structure of bodies, it is necessary to adopt a somewhat desultory arrangement of facts. Our endeavor will be to furnish an outline of the most remarkable of these discoveries, accompanied with such instances of the application of the microscope to the purposes of science and of every-day life as appear the most interesting. Let us take a glance at what this wonder-working apparatus reveals to us of the structure of the solid crust of our globe. In 1839, Professor Ehrenberg communicated to the Natural History Society of Berlin the remarkable fact of his having discovered a bed of earth which, the microscope revealed, was composed almost wholly of living infusoria. This formation is situated in Berlin itself, and extends to twenty, and in some localities, it is said, even to sixty feet in depth, in the form of a funnel. It is situated at a depth of about fifteen feet. It is composed in about two thirds of its mass of minute siliceous infusoria, of which the most astonishing fact concerning it is, that a very considerable portion is still living and breeding. The organisms cannot come in contact with the air for the purpose of oxygenation in any other way than by the water which percolates through the mass; yet life is sustained, and apparently actively carried on, in this enormous population of microscopic beings. Twenty feet below the pavement of this city lies the city of the infusoria; and the bustle of human life thick and crowded above bears no comparison to the intensity of that below, where in a few cubic feet are

contained billions more than the population of the city of men. In some quarters of Berlin the solidity of buildings is actually endangered by this bed of living beings. About the same period, a mass more than twenty feet in thickness of light siliceous earth was found near Ebsdorf, in the neighborhood of Lüneburg, in Hanover. This bed is covered with one of peat earth only one foot and a half thick. The upper stratum is about ten feet thick, and is very white; the under one is colored, and is about the same thickness. On examination by the microscope, it was found that these beds not only contained the minute shields of invisible infusoria, but actually consisted of them. These coverings were in a beautiful state of preservation, and were recognized as identical with those of infusoria living in the ponds in the neighborhood. Individually, it need scarcely be said that they were wholly invisible to the naked eye. On the discovery of these interesting facts, other observers set to work, and in a short time a mass of microscopic intelligence was received relating to these beds, composed of the bodies or coverings of individually invisible beings. In Virginia, there are extensive beds of siliceous marl, which consist in the main of the shields of infusoria. When a few grains of this earth are examined with a good microscope, forms of exquisite beauty and variety reveal themselves. In fact, the slightest stain left by the evaporation of a drop of slightly-muddy water teems with these beautiful forms of minute existence. The towns of Richmond and Petersburg, in Virginia, are built upon the bodies of infusoria; the strata being several yards in thickness. The polishing powder commonly called Tripoli, and largely employed in the arts for polishing metals, furnishes us with another wonderful evidence of the vast accumulation of microscopic forms of being. This substance is obtained from Billin, in Bohemia; but it is also found in other places. It forms a series of beds fourteen feet thick, and is entirely composed of the siliceous shields of infusoria. These shields are in a state of very perfect preservation, and are supposed to have been exposed to the action of a high temperature, by which all organic matter has been driven out. It is said that a single druggist's shop in Berlin consumes yearly more than twenty hundred-weight of this substance, and yet the supply is by no means exhausted. What an idea does it give us of the immensity of microscopic life, to learn that a cubic inch of this polishing-slate, weighing 220 grains, contains upwards of forty thousand millions of individual organisms!

Of the minute dimensions of these animals the powers of ordinary language fail in conveying an approach to an adequate idea. Yet their organization is by no means simple. They possess several stomachs and a mouth. They are furnished with a number of movable processes called cilia, millions of times more minute than the most delicate hair of the human head! Some of them possess the most exquisitely carved and sculptured shields, consisting of a perfectly pure and colorless flint or silice. The pattern on these shields is distinct and constant for the same species; and they can thus be classified and arranged. Yet the field of the microscope is to one of these beings pretty much what England would be to a single man. Of the most minute of these wonderful beings it would require more than ten millions of millions of individuals to fill the space of a cubic inch! Within how small a compass can the Almighty Author of life enshrine that principle! "We have been accustomed," says Dr. Mantell, "to associate the

presence of vitality with bodies possessing various complicated organs for the elaboration and maintenance of the energies of existence; but here we see perfect and distinct creatures, in the condition of single globules and cells, that live, and move, and have their being, and increase in numbers with a rapidity so prodigious, and in modes so peculiar, as to startle all our preconceived notions of animal organization."

Ehrenberg's discoveries in the same direction—namely, in the influence of microscopic life in the formation of vast deposits—lead to still more important conclusions. In 1839, he instituted special researches upon the form of the harbor of Wismar, in the Baltic. The result of his investigations shows that from one twentieth to one fourth of the mass of deposited mud consisted of living infusoria in part, and partly of the empty shells of dead ones! In this harbor it appears that every week there is deposited upwards of 200,000 lbs. of mud. During the last hundred years there have been deposited by the running waters at Wismar 3,240,000 hundred-weight of this mud. About one tenth of this deposit consists, on the average, of infusorial animalcules! At Pillau, M. Hagen found that often half the entire volume of mud consists of infusoria. He calculates that at this place not less than from 7200 to 14,000 cubic metres of pure microscopic organisms are annually separated from the waters, and deposited in the form of mud. In the course of a century this would form an accumulated deposit of from 720,000 to 1,140,000 cubic metres of infusory rock, or Tripoli stone. Ehrenberg pursued his inquiries with his all-revealing microscope upon the mud of the Nile, the fertilizing properties of which have for ages attracted the notice of mankind. In all the specimens he has examined, he has found that infusory animalcules—beings of microscopic size—exist in such vast abundance, that there is not a particle of the soil left by the retiring waters of the size of half a pin's head which does not contain one, and frequently many, of these animals. How striking the idea thus furnished to us! From time immemorial, it has been customary to attribute much of the fertilizing influence of these deposits to their chemical constituents derived from degraded rocks, or to decaying vegetable remains. Yet the microscope has told us, on the contrary, that it is to neither of these causes that this effect is chiefly attributable, but rather to the multitudinous accumulation of infinitely minute living forms of animal life, wholly undiscernible to the naked eye in themselves, but in the mass constituting no insignificant portion of the solid soil. Truly it is a humbling thought for man—as year by year he plies his huge dredging machines, summoning the aid of steam, and the appliances of mechanism, to remove an aggregation of beings thousands of which would lie on the end of his finger—to reflect that he is put to all this labor and cost by the most insignificant objects in the whole range of creation! The microscope, which discloses these particulars, also seems to promise to be of service in the purposes of agriculture. The deposit of all rivers and irrigation are not always successfully resorted to by the agriculturist. Probably this instrument would inform him whether the deposit in the muddy waters of the river were suited, or otherwise, to the necessities of his fields. Particles of the mud of various rivers in many parts of the globe were sent to Ehrenberg for examination by his microscope, and it may convey an idea of the skill of this observer, and of the delicacy of microscopic research, when



it is stated that though these particles did not in many instances exceed the twelfth of an inch in thickness, yet that several hundreds of distinct species were accurately made out.

Yet wide as is the prevalence of microscopic animal life, coëxtensive as it is with the realms of nature, the minute forms of what are now considered to be vegetables are scarcely less abundant, nor their influence and importance in the operations of nature less intense.\* The microscope, when applied to the investigation of the green scum of a stagnant wayside pool, or to the mud of the ocean itself, tells us of a world of what are now considered to be vegetable forms, full of marvellous thought for us. Those plants which are included in this microscopic world are divided by botanists into two families, of which the one called *Desmidiæ* exclusively inhabit fresh water; while the others, or *Diatomacæ*, are principally marine. Most unlike plants are these singular creatures! And indeed the zoölogist and botanist have scarcely yet ceased their disputations as to which science has the strongest claim upon them for its own. From very recent researches, it appears, however, that the botanists have got the best of the day; the *Desmidiæ* and *Diatomacæ* are now exclusively their own. In shape they resemble mathematical figures of microscopic dimensions rather than vegetable organisms. They form circles, parallelograms, triangles, to the utter overturning of our ideas about the line of beauty as applied to organized beings. From their property of withdrawing siliceous matter from its solution in the waters in which they are found, their bodies are indestructible; hence their constantly-accumulating remains are gradually being deposited in beds under the waters of the sea, as well as in lakes and ponds. "At first," says Dr. Harvey in his agreeable Sea-Side Book, "the effect produced by things so small—thousands of which might be contained in a drop, and millions packed together in a cubic inch—may appear of trifling moment, when speaking of so grand an operation as the deposition of submarine strata. But as each moment has its value in the measurement of time, to whatever extent of ages the succession may be prolonged, so each of these atoms has a definite relation to space, and their constant production and deposition will at length result in mountains. The examination of the most ancient of the stratified rocks, and of all others in the ascending scale, and the investigation of deposits now in the course of formation, teach us that, from the first dawn of animated nature up to the present hour, this prolific family has never ceased its activity. England may boast that the sun never sets upon her empire, but here is an ocean realm whose subjects are literally more numerous than the sands of the sea. We cannot count them by millions simply, but by hundreds of thousands of millions. Indeed, it is futile to speak of numbers in relation to things so uncountable. Extensive rocky strata, chains of hills, beds of marl, almost every description of soil, whether superficial, or raised from a great depth, contain the remains of these little plants in greater or less abundance. Some great tracts of country are literally built up of their skeletons. No country is destitute of such monuments, and in some they constitute the leading features in the structure

of the soil. The world is a vast catacomb of *Diatomacæ*; nor is the growth of those old dwellers on our earth diminished in its latter days."

Dr. Hooker gives a remarkable account of the abundance of these microscopic vegetables—if such they shall be ultimately allowed to remain. The waters—nay, even the ice of the whole Antarctic Ocean, between the parallels of 60 and 80 degrees south, abound in them. In such countless myriads do they people these waters, disadvantageous though the external conditions appear to be to the multiplication of life, that the sea was everywhere stained of a pale ochreous brown; in some cases causing its surface, from the locality of the ships as far as the eye could reach, to assume a pale-brown color. Though thus peculiarly abundant in the Icy Sea, these microscopic plants are probably uniformly dispersed over the whole ocean; but being invisible from their minuteness, can only be recognized when washed together in masses, and contrasted with some opaque substance. On this vegetation the whole of the animal kingdom which swarms in the waters of the Antarctic Ocean probably ultimately depends for its existence. What a link—rather what an amazing system of links—is that in nature which connects by an undiscoverable bond the microscopic plant with the immense forms of animal life which people the ocean! The death and decomposition of this minute vegetation—for it, too, like all terrestrial things, has its allotted period—are gradually producing a submarine deposit or bank of vast dimensions. It flanks the whole length of Victoria Barrier—a glacier of ice some 400 miles long; and it occupies an area of 400 miles long by 120 broad. All the soundings over this deposit—and the lead sometimes sunk two feet in it—brought up nothing, or scarcely anything beside *Diatomacæ*. The Infinite Mind alone can enumerate the individuals lying in this deep sea-grave.

This is much; but this is not all that the microscope has revealed to us as to these wonderful plants. The *Diatomacæ* perform long journeys through the air! They have been found floating in the atmosphere that overhangs the tropical Atlantic. Darwin, during the voyage of the *Beagle*, collected an impalpable dust which fell on Captain Fitzroy's ship when to the west of the Cape de Verd Islands; and this, on examination with the microscope, proved to consist of the skeletons or framework of *Diatomacæ*. These remains must have been ejected from some volcano then in activity. In consequence of their siliceous skeletons they resist the action of fire, and form with infusoria constituents of the pumice and ashes which are vomited from the burning crater. "In fact," says Dr. Harvey, "it is difficult to name a nook on the face of the earth, or in the depths of the sea, where they are wholly absent, either in a dead or living state; and their office in the general economy, besides affording food for the humble members of the animal kingdom, seems to be the preparation of a soil for a higher class of vegetables. This they effect by the minute division of the siliceous particles laid up in their tissues, and probably make this really insoluble earth (siliceous matter) more fit for assimilation by other plants. We must also suppose them endowed, like other vegetables, with the power of decomposing carbonic acid and liberating oxygen, and thus in countless myriads exercising no mean place in the household of nature. Like their mistress, these her humblest servants work in secret. We know not what we owe them. But continued

\* Most probably many of the minute forms which Ehrenberg has shown to be of such importance in the preceding details, and which he considers to be animals, belong to the two families *Desmidiæ* and *Diatomacæ*.

as their existence is through all time, and dispersed as they are through every part of the world, even where the ice-bound sea is peopled by nothing else, we may rest assured that they perform some work which renders them worthy the care of a Providence who creates nothing superfluous.\*

Let us again return to the crust of the earth, and inquire in another direction what part minute organization of a different kind has performed in rearing up its massive substance. Let the reader mentally follow the track we shall point out to him, and endeavor, if he can, to estimate the cubic contents of such a mass of solid matter, if he would gain an idea of the importance of microscopic life in the work of creation. Commencing at Dover, or Beachy Head, follow the course of the North or the South Downs up to their point of junction in the east of Hampshire, where they are joined by another branch of similar downs commencing near Weymouth. These three chalk ranges enclose an area which includes all the north of Hampshire, and the larger portion of the south of Wiltshire. Yet this is not all. By the Marlborough Downs, by the Ilsey Downs and the Whitehorse Hills, the chalk runs into Oxfordshire, and continues, with some interruptions, through Buckinghamshire, Bedfordshire, and Cambridgeshire into Norfolk. Neither is this all. The lofty cliffs between Cromer and Huntanton, the Wolds of Lincolnshire and those of Yorkshire, all are chalk. Southward, let the tourist say how much of the Isle of Wight is chalk. Chalk along the coast, chalk in hills, chalk in valleys—chalk forms the Inkpen Beacon, Wilts, a thousand feet above the sea, chalk forms the Needles crumbling into it; all is chalk, nothing but chalk—chalk and flints! Yet stay—take up a pinch of the white mass, lay a particle of it no bigger than a pin's head on the field of the microscope, and what a startling spectacle discloses itself! The dust is thick with organized forms. All is shells and corals! The Needles are shells and corals—the Downs are shells and corals! Underneath the thin green turf of the Wolds lie shells and corals. The great Humber rolls over shells and corals. The white walls of England are—shells and corals. Shakspeare's cliff is shells and corals. The waters which sweep round Margate, Ramsgate, and Dover, white as milk, are full of the remains of shells and corals! A million of shells and corals lie in a cubic inch of chalk! What inconceivable millions in a hill, and what in the whole range! And these of the most beautiful forms, all once replete with life! How large a part of England's southern and western coast is made up of individual beings more minute than a pin's point! These minute beings—and the idea is still more strange—approach us in our homes. Do we whitewash our ceilings, it is with shells and corals! Shells and corals, it is said, come to us in our London milk! Shells and corals form the beautiful glazing of a lady's card, and oftentimes the ornamental covering of her work-boxes or show-books! The doctor sends us shells and corals in his physic, and the confectioner, as we are told, in his comfits! The microscope, skilfully applied, makes all this plain, and reveals to us in a language appreciable to the eye, though barely capable of being fully comprehended by the mind, how vast a share in the operations of nature the Creator has assigned to beings so infinitely minute.

The *Foraminifera*, of which these shells chiefly consist, swarm in inconceivable numbers in our present seas, and are constantly adding largely to

submarine deposits. The individuals of a very minute species, called, from their resemblance to a grain of millet seed, *milola*, entirely compose several thick beds of a rock called *calcaire grossier*, in the neighborhood of Paris. A cubic inch of this stone from the quarries of Gentilly contains, on an average, 58,000 of these minute shells, and the beds are of great thickness and considerable extent. "It may even be asserted," says Professor Ansted, "without fear of contradiction, that the capital of France, as well as the towns and villages of the neighboring departments, are almost entirely built of *Foraminifera*; and these little fossils are scarcely less abundant in other tertiary formations, extending in the south of France from Champagne to the sea; and being found also in the basins of the Gironde, and again in that of Vienna." Dr. Buckland has well observed that the remains of such animalcules have added a thousand times more to the mass of materials which compose the exterior crust of the globe than the bones of elephants, hippopotami, and whales.

It has long been known that in times of scarcity certain savage nations have been in the habit of eating earth, either by itself or mixed with their other food, in order to eke it out. Humboldt, in his recent edition of the "Aspects of Nature," makes the following observations upon this point:—"The earth which the Otomacs eat is an unctuous, almost tasteless clay, true potter's earth, (Ehrenberg detected infusoria in it,) of a yellowish-gray color. They select it with great care, and seek it in certain banks on the shores of the Orinoco and Meta. They distinguish the flavor of one kind of earth from that of another—all kinds of clay not being acceptable to their palates. They knead this earth into balls measuring from four to six inches in diameter, and bake them before a slow fire until the outer surface assumes a reddish color. Before they are eaten the balls are again moistened." During the intervals of the periodical swellings of the rivers the fishing is stopped,\* and the Otomacs for two or three months are deprived of their ordinary means of subsistence—fish and turtles. They then devour enormous quantities of earth. Humboldt found in their huts considerable stores of these earth-balls piled up in pyramidal heaps.

An Indian will consume from three quarters of a pound to a pound and a quarter of this food daily, and in fact it constitutes their main support during the rainy season. So partial do they become to this food, that even in the dry season, when there is abundance of fish, they still partake of some of these earth-balls by way of a *bonne bouche* after their regular meals. If an Otomac be asked what are his winter provisions—the term winter in the torrid parts of South America implying the rainy season—he will point to the heaps of clay in his hut. It is often found necessary in other tropical countries to shut children up, in order to prevent their running into the open air to devour earth after recent rain. "The Indian women," says Humboldt, "who are engaged in the river Magdalena, in the small village of Banco, in turning earthenware pots, continually fill their mouths with large lumps of clay, as I have frequently observed, much to my surprise." In Guinea the negroes are said to eat a yellowish earth, which they call *caouac*; and when they are carried as slaves to the West

\* These savage people obtain their fish by shooting them as they rise, with a bow and arrow, with infinite dexterity.

Indies, they even endeavor there to procure for themselves some similar species of food, maintaining that the eating of earth is perfectly harmless in their African home. It appears, however, that this luxury is not so harmless, for the West Indian planters forbid it to their slaves, whose health was becoming impaired thereby. Yet the treat could not be altogether forborne, and a species of reddish-yellow earthy substance was recently sold in the market of Martinique. So passionately fond do these poor creatures become of this singular food, that no punishment can prevent them from devouring it. In the island of Java earth-cakes are sold as commonly as tarts in the streets of our towns in Britain. In Samarang, a species of edible earth is tastefully prepared in the form of tubes, resembling sticks of cinnamon; and in Popayan we are told that calcareous earth is sold in the streets as an article of food for the Indians. This is eaten together with the Coca, the leaves of a tree which have an intoxicating property. Humboldt remarks that this practice of eating earth is common throughout the whole of the torrid zone, among the indolent races who inhabit the most beautiful and fertile regions of the earth.

The practice is not, however, confined to the southern regions of the globe. In Finland, earth is mixed with the bread. It consists, says Humboldt, of empty shells of animalcules, so small and soft, that they break between the teeth without any perceptible noise. The inhabitants of Swedish Lapland are also in the habit of mixing with their food in times of dearth a peculiar substance resembling earth, which is found under a bed of decayed moss. This they call *Berg* or mountain-meal. On examination with the microscope, it has been found to consist almost entirely of minute organized forms, the presumed presence of organic matter in which has been considered to form the chief of the useful properties of the substance as an article of food. In a letter written to Stanislaus Julian by a Chinese missionary, an account is given of a substance called *Fossil-flour* by the Chinese. In times of great dearth it is sold at a certain rate per pound. It is used in the form of powder, mixed with wheat or rice-flour, and flavored with salt or sugar. It was only had recourse to in times of great scarcity. Those who partook of it generally complained of a weight at the stomach, and other uncomfortable feelings. It is said they could subsist on it, mixed with other food, for two months, when without it the same quantity of food would only last for one month. Examined by the microscope, this substance was also found to consist of the remains of organized beings. Thus, then, the microscope discloses to us the singular fact, ascertainable by no other means, that in these remarkable instances—that is, in all which have been carefully examined—of the adoption of mineral food in times of scarcity, mankind in its rudest state have been singularly directed to a choice of a similar material.

While upon the subject of microscopic disclosures, allusion may be made to some, the singularity of which deserves our notice. On the 31st of January, 1687, a great mass of paper-like black substance fell with a violent storm from the atmosphere near the village of Rauden in Curland. It was seen to fall, and after dinner was found at places where the laborers at work had seen nothing similar before dinner. This meteoric substance excited great curiosity at the time, but all attempts to unravel its constitution were unsuccessful. An

able chemist considered it to be a meteoric mass. Some of this substance was deposited in the Berlin Museum, and lay there, its structure a problem to the learned. Ehrenberg at length took a piece of it, and applied the microscope to its elucidation. Fortunately with a successful issue. It was found that this paper-like mass consisted of a compactly-matted heap of minute organisms—a few *confervæ*, and about thirty species of infusoria. Thus, after a puzzle of more than 150 years, the microscope came to the aid of the learned, and in a few minutes solved the problem. In 1736, after an overflow of the river Oder, in Silesia, a mass of paper-like substance was found which excited some attention, and was called *Natural Paper*. A portion of it was preserved in the library at Breslau. A little more than a century elapsed before its true nature was made out, and again by the indefatigable Ehrenberg with his all-penetrative microscope. This substance, which is called by Humboldt *Natural Flannel*, was found to consist of a filamentous tissue of *confervæ* and nineteen species of infusoria. A somewhat similar mass was recently found in one of our British rivers, and its true nature was ascertained in a similar manner. In a letter to the editors of the "Annals of Natural History" for 1839, a small piece of a curious substance resembling white dressed glove-leather was forwarded. It was found in a meadow at Schwartzenberg. The outside resembled fine paper in texture, or more nearly soft-dressed glove-leather; it had a glistening surface, and was smooth to the touch, and as tough in texture as ordinary unsized paper. The microscope unfolded its structure, and it was found to consist of a compact belt of *confervæ* bleached by the sun on the upper surface, and containing a number of siliceous infusoria. Vulgar superstition in a past age would have, and in all probability did attach a supernatural character to all these productions. How many a fairy tale does science resolve into hard facts and ungilded expressions of truth; and the instrument which is at present occupying our attention has contributed its share to the dethronement of fiction and the erection of fact.

It has been seen what part—how vast and important!—microscopic life has performed and continues to act in reference to the solid structure of the globe. It may be useful to suggest a few thoughts as to its multitudinous presence in the waters of the ocean. And here, not less than in other instances, the microscope enables us to perceive the truth and force of the expressions of the poet—

See through this air, this ocean, and this earth,  
All matter quick, and bursting into birth.

Before, however, we draw attention to a few facts connected with the abundance of microscopic life in the waters, it may be useful to make the reader acquainted with one or two members of this immense family, the individuals of which outnumber the sands, and the stars of heaven. The term infusoria, as applied to these minute forms of existence, may appear at first sight wholly out of place, since the existence of these minute creatures is as universal as the waters of the earth, and by no means confined simply to infusions of vegetable substances. Its origin is thus explicable. The presence of these microscopic organisms was first detected by that instrument in water containing vegetable matter; and for some time it was considered that they were peculiar to certain infusions. The name still

remains, and is useful both as a general designation, and also as a historical record of the first revelation of the world of minute life in the waters. The characters essential to this group of organized life have been described to be the following:— Their bodies are destitute of true articulated or jointed limbs and locomotive members; their movements are performed by means of peculiar processes resembling minute hairs, called *cilia*, from their resemblance to those of the eyelash. These minute processes are arranged in different methods; in some they are distributed over the general surface of the body, in some they are arranged in zones or circles on its upper part, and in others they are disposed in a circle around the mouth or aperture of the digestive organs. The arrangement of these cilia, and the structure of the digestive apparatus, supply the elements for arranging infusoria. One class is called the many-stomached or *Polygastria*, the other the *Rotifera*, from their apparent rotatory movements when seen on the field of the microscope, giving to them somewhat of the appearance of a wheel revolving on its axis. The polygastric animalcules form a class which includes some of the most minute forms of animal life revealed by the microscope. Some, however, are visible to unassisted sight. Their home is the waters; and in these, fresh and salt, they often accumulate in such prodigious numbers that the mind shrinks from applying the powers of figures to their calculation. Yet these minute beings, which the most powerful microscope just brings within the narrow confines of human perception, live, move about, and show a wonderful degree of vital activity. Their movements are all effected by the assistance of the tiny cilia; and when it is mentioned that some of the minuter forms of polygastric animalcules are actually less than the full stop of the present paragraph, an idea of the excessive minuteness of the locomotive apparatus of such a creature may be formed. So active are these cilia, and such bustling little creatures are those to whom they belong, that a most animated spectacle is presented to the eye in the examination of almost any drop of stagnant water placed on the microscope. The observed of all observers—whose sight is sufficiently acute, we should add, are the active little members of the group called *monads*. There is something about these minute organisms peculiarly attractive to the microscopic observer. Beneath his eye, in the tiny drop of liquid which lies on the glass-plate below his object-glass, numerous little points are seen sailing gayly about and with the most *nonchalant* air, as though life went easily enough with them; now darting rapidly across, now leisurely moving from one spot in this mighty sea to another. Of such Ehrenberg has said that a selected drop of water may actually contain as many as there are men upon the surface of our great globe itself! These minute creatures are not destitute of color. Some are apparelled in shining green, others in pink or yellow. Perhaps one of the most interesting of the group is that originally discovered—in spite of the imperfection of his instruments—by Leeuwenhoek. It was then thought to be a single animalcule, but it now appears that it consists in reality of a group enclosed in a little globular case. Each is a distinct individual, yet each, in some mysterious way, maintains an organic connection with its companions. This group of monads rolls round with a peculiar revolving movement as it passes across the microscopic field; hence its name—*volvox*. Within

the outer case may be seen frequently six or eight small ones. These are young *volvoes* preparing to come out into the world. This little colony, urged forward by its ciliary processes, passes from place to place in the waters, and effects all the functions of its narrow sphere of life as perfectly as if it were a group of beings of infinitely more importance and higher organization. It is a good illustration of the fact, that all the works of God are perfect. The smallest living object in the world is in itself, and for the part it is destined to perform in nature, as perfect as the largest. Night and day seem both alike to these polygastric animalcules. No matter to the monad whether the great luminary of the earth lights up the unwholesome waters in which its existence is carried on, or whether the darkness of night overlies them. Its circling movements seem never to be wearied, and appear to cease only with life itself.

The rotifera form a class not less interesting, and probably better known than the polygastria. The organization of these animalcules is much higher than that of the polygastric. They are found, however, in similar situations; and in almost every infusion of vegetable matter which has been allowed to decompose, the remarkable and beautiful Wheel-animalcule may after a time be discovered. This minute creature—*Rotifer vulgaris*—excited the most intense curiosity on its first discovery, in consequence of the surprising appearance it presented when viewed by the microscope. At the anterior part of the body the learned beheld two little organs exactly resembling wheels, and, like them, moving apparently upon their axes! The most minute investigation failed to render this phenomenon, which was as extraordinary for a living animal as for a man's head to be always turning round on its axis—in a word, a motion of the kind seen, and which any reader may see if he will get a microscope and search for the creature in stagnant water, was impossible in an organized being, the union and connection of whose parts forbid the idea. Yet the motion existed, and remained long a puzzle to philosophers. It is now universally allowed to be an optical illusion. At the anterior part of the body of this animalcule, there are two circular rows of cilia rather larger in size than those of the polygastria. The combined appearance of a number of cilia moving in a particular direction, and the alternate appearance and disappearance of the several processes as they move, contributes to impress the eye with the image of a wheel in motion. The object of this movement it is easy to see if we will sprinkle a little finely-powdered carmine upon the water in which the animalcules are contained. If the colored grains are watched, it will soon become evident that our rotifers are, though so minute, a very voracious set of creatures. The effect of the cilia is to produce such a current in the surrounding waters as to form a miniature whirlpool, and the grains are rapidly sucked into it. In this manner hundreds of unfortunate animalcules are drawn into the dangerous vortex, and yet more formidable digestive apparatus of the rotifer. Surprising though it may appear, this wheel-animalcule, not the thirty-sixth part of an inch long, possesses both jaws and teeth! Some of them have a very powerful pair of nippers, by which they seize and tear to pieces their living prey; and others have an equally efficient crushing apparatus which reduces to pulp the bodies of luckless beings of the bigness of a needle's point, or smaller! The multiplication of the



wheel-animalcules is extremely rapid. They are produced from germs. Some are viviparous, others oviparous; and twenty-four hours is a sufficient period for an individual to be born, be developed, and itself become a parent.

The revivification, as it has been called, of the rotifera has long engaged the attention of microscopical observers. That the bodies of these animalcules should retain the principle of life after the lapse of a considerable period, during which they remained to all appearance dead, appeared so startling, that few were disposed to believe it possible. Yet a number of experiments seemed to leave little doubt on the matter. Fontana, in his treatise on poisons, distinctly states that he succeeded in restoring to animation, after two hours' immersion in water, a wheel-animalcule which had lain in a dry and motionless condition for the space of two years and a half! More recently a careful and experienced observer, Doyère, performed a number of beautiful experiments with the intention of elucidating this phenomenon. He comes to the result, that under certain circumstances these wonderful animalcules undoubtedly may be revived after remaining in an apparently dead state. He states that their dry and motionless forms may even be exposed for three or four weeks in barometric tubes in vacuo, so as to withdraw, one would suppose, every particle of moisture from them, and yet revivification will subsequently take place! It appears, in fact, that the sole condition necessary to their reawakening is the perfect integrity of their organic structure and continuity. In Ehrenberg's great work on "Infusoria," this subject is fully entered into. He believes that notwithstanding all the means of desiccation employed, the organization-fluid still remains in the apparently dead animal. He contests the hypothesis of latent life; for death, he says, "is not life in a torpid state, but the absence of life." And Humboldt evidently embraces the same opinion, for, he says, the apparent revivification of the rotifera, and of the siliceous-shelled infusoria, is only the renewal of long-enfeebled vital functions—a condition of vitality never entirely extinguished.

Leaving the infusoria, after this short special consideration of them, we may apply the microscope to the waters of the ocean, as the astronomer his telescope to the unfathomable heavens, and with a very similar result. For, as the one discovers in the depths and far out-lying regions of space worlds and spheres innumerable, so the other beholds, wide as the waters of the ocean roll, a world of minute organic life equally beyond his highest powers of enumeration. Scoresby throws out an idea as to the numbers of the minute forms of life in the Arctic Ocean, which has always appeared to us to furnish the most astounding view of this inconceivable multitude. In these seas the water generally—like all water free from earthy impurities—is of a deep ultramarine hue. But parts of it, often covering an area of twenty or thirty square miles, are rendered green, and even turbid, from the quantity of minute animalcules contained in them. It was found that these creatures extended down to the depth of 1500 feet. Now Scoresby estimates that it would require 80,000 persons, working unceasingly from the creation of man to the present day, to count the number of minute beings contained only in the space of two miles of that turbid water! What, then, must be the sum which shall represent the aggregate of organic life in the waters of the Polar Sea, where one fourth

part of the Greenland Sea, for ten degrees latitude, consists of water thus surcharged with animalcules! These organisms differ from those we have been just describing, and belong to the tribe of medusae. On the coast of Chili, says Mr. Darwin, "a few leagues north of Concepcion, the *Beagle* one day passed through great bands of muddy water, exactly like that of a swollen river; and again, a degree north of Valparaiso, when fifty miles from land, the same appearance was still more extensive. Some of the water placed in a glass was of a pale-reddish tint; and, examined under a microscope, was seen to swarm with minute animalcules darting about and often exploding. They were exceedingly minute, and quite invisible to the naked eye, only covering a space equal to the square of the thousandth of an inch. Their numbers were infinite, for the smallest drop of water which I could remove contained very many. In one day we passed through two spaces of water thus stained, one of which alone must have extended over several square miles. What incalculable numbers of these microscopic animals! The color of the water, as seen at some distance, was like that of a river which has flowed through a red clay district; but under the shade of the vessel's side it was as dark as chocolate. The line where the red and blue water joined was distinctly defined. The weather for some days previously had been calm, and the ocean seemed to an unusual degree with living creatures." Pöppig mentions his having observed a somewhat similar phenomenon near Cape Pilares. In this instance the bed of discolored water was tinged of a reddish color for a space twenty-four miles in length and seven in breadth. Seen from the mast-head, the sea assumed a dark-red tint, as though the blood of some marine monster the multitudinous waters did "incarnadine, making the green one red." As the ship proceeded, the tint changed to a brilliant purple, and the wake of the vessel was a delicate rose color. The water is described as having been perfectly transparent, but small red dots could be seen in it moving in spiral lines. Even in the dark abysses of the ocean, at depths where hitherto it has been considered that the functions of animation could not be exercised, 6000 feet below the surface, the existence of minute organic life has been distinctly proved in the recent Antarctic voyage of Sir James Ross. Humboldt's remarks on this vast prodigality of animal life in the ocean are very pertinent to our subject:—"It is," he says, "still undetermined where life is most abundant; whether on the earth or in the fathomless depths of the ocean. Ehrenberg's admirable work on the relative condition of animalcular life in the tropical ocean, and the floating and solid ice of the Antarctic circle, has spread the sphere and horizon of organic life before our eyes. Siliceous-shelled *polygastria*, and even *coscinodiscæ*, alive with their green ovaries, have been found enveloped in masses within twelve degrees of the pole; even as the small black glacier flea and podurelle inhabit the narrow tubules of ice on the Swiss glaciers, as proved by the researches of Agassiz. Ehrenberg has shown, that on some microscopic infusorial animalcules other species live parasitically; and that in the *gallionella* the extraordinary powers of division and development of bulk are so great that an animalcule invisible to the naked eye can in four days form two cubic feet of the Bilin polishing slate."

That natural phenomenon—beautiful in any latitude, but gorgeous beyond description in the tropics

—the phosphorescence of the sea, appears due in great part to the light-emitting powers of innumerable hosts of minute animals sporting on the wave. Coleridge well describes this phenomenon in his "Ancient Mariner:"

Beyond the shadow of the ship  
I watched the water-snakes:  
They moved in tracks of shining white,  
And when they reared, the elfish light  
Fell off in hoary flakes.

Within the shadow of the ship  
I watched their rich attire:  
Blue, glossy-green, and velvet-black,  
They coiled and swam; and every track  
Was a flash of golden fire.

"Indelible," says the last-quoted, world-renowned traveller, "is the impression left on my mind by those calm tropical nights of the Pacific, where the constellation of Argo in its zenith, and the setting Southern Cross, pour their mild planetary light through the ethereal azure of the sky, while dolphins mark the foaming waves with their luminous furrows." There has been much discussion as to the cause of this phenomenon; but the microscopist and the chemist seem to have settled it between them by a sort of compromise. For it now becomes apparent that it is due both—as the chemist affirms—to the decomposition of organic matter (Schönbein says, by the agency of ozone,) and also to that power of emitting light which is the peculiar attribute of many marine creatures, and particularly, as the microscopist has discovered, of an innumerable host of tiny medusæ, and the ever-present infusoria. Ehrenberg adopted an ingenious method of procuring a collection of luminous infusoria. He passed a large quantity of fresh sea-water, through a filter, and by collecting what was left upon it he soon accumulated a vast number of these light-emitting creatures. The appearance of these minute torch-bearers of the seas, beheld on the darkened field of the microscope, is highly interesting. A minute drop of an acid will irritate them, and cause the development of a mimic flash instantly. "When," observes Ehrenberg, "the *Photocharis* is irritated, in each cirrus a kindling and a gleaming of separate sparks may be observed, which gradually increase and at length illuminate the whole cirrus, until the living flame runs also over the back of this nereid-like animalcule, making it appear under the microscope like a burning thread of sulphur with a greenish-yellow light. The manifestation of this wreath of fire is an act of vitality, and the whole development of light an organic vital process, which exhibits itself in infusorial animals as a momentary spark of light, and is repeated after short intervals of rest." This light has been generally considered to be electro-magnetic; and it has been well remarked, that if such is the case, these minute infusoria must be capable of an enormous electric tension of their organs, to enable them to shine so vividly in a medium which forms of itself such a powerful conductor of the electric energy. In addition to the light-emitting living organisms, the microscope has detected in phosphorescent water vast quantities of torn, jagged shreds of organic matter, probably the remains of medusæ, which shine by virtue of a chemical decomposition set up in all dead organic matter. When Humboldt and his companions bathed at Cumana, in the Gulf of Cariaco, and walked on the solitary beach on emerging from the waters, parts of their bodies

remained luminous from the fibres and membranes which adhered to the skin, nor did they lose this luminosity for some minutes.

In addition to the diatomaceæ, the vegetable kingdom has also its minute representatives abounding in numbers infinite in certain seas. A very interesting fact in connection with this is the recently-established one of the color of the Red Sea being ascribable to the presence of an inconceivable multitude of minute vegetable bodies. The fact that these waters are in reality colored has often been questioned, and travellers have denied that any such color is present as to justify the application of the title. Others, however, have been more fortunate in witnessing the phenomenon, and their accounts fully confirm what history has long handed down to us—that a red shade, of a very singular character, is in reality present in the waters. Dr. Harvey ingeniously reconciles these conflicting statements, by supposing that the observations were not made at the same season of the year, for if the color depends upon the presence of vegetable matter, it is highly probable that it will vary in degree at different seasons. That these waters are occasionally coated, says the same writer, with a scum of red color, is certain, and portions of it have been brought home, and carefully examined by several naturalists. M. Montagne, employing the microscope to the investigation of the subject, has given an elaborate account of specimens which were forwarded to him for examination, and has distinctly proved that the scum is entirely made up of very minute algæ, consisting of delicate threads, collected in bundles, and containing rings of some red matter within a slender tube. During the voyage of the *Beagle*, Darwin's attention was called to a reddish-brown appearance in the sea; the whole surface of the water, when viewed by a low microscopic power, seemed as if covered with bits of chopped hay with the ends jagged. These, on examination, proved to be minute algæ, and were of the same species with that found in the Red Sea. The numbers of these pelagic vegetables must be infinite. The *Beagle* passed through several bands of them, one of which was ten yards wide, and, judging from the mud-like color of the water, at least two and a-half miles long. Sailors give the phenomenon the name of "sea sawdust."

MM. E. Dupont and Montagne have given a curious account in the *Comptes Rendues* of the redness of the Red Sea, and its cause. "I entered the Red Sea," says one of these gentlemen, "by the straits of Babelmandel on the 8th of July, 1843, on board the Arabian steamer. On the 15th the burning sun of Arabia suddenly awoke me with its brilliancy unannounced by dawn. I was leaning mechanically out of the poop windows, to catch a little of the fresh air of night before the sun had devoured it, when imagine my surprise to find the sea stained red as far as the eye could reach behind the vessel! If I was to attempt to describe this phenomenon, I would say that the surface of the ocean was entirely covered with a close thin layer of fine matter, the color of brick-dust, but slightly orange. Mahogany sawdust would produce such an appearance. When put into a white glass bottle, it became in the course of a day deep violet, while the water itself had become a beautiful rose color. This appearance extended from Cosseir, off which we were at day-break on the 15th of May, to Tor, a little Arabian village, which we made about noon the next day,

when it disappeared, and the sea became blue as before. During this time we must have passed through about 256 miles of the red plant."

Leaving the domains of the waters, and the regions of the earth, let us direct a few thoughts toward a subject at present ill understood, but at the same time highly interesting—life in the air. It is to be remarked, however, at the outset, that it is inconceivable that any species of either vegetables or animals should constantly live in the air. While the earth is the great dwelling-place, and the sea the broad home, of an innumerable multitude of those minute organisms to which we have directed attention, the air is merely a temporary residence to any of them. No animal or plant with which we are acquainted, however minute, can ever carry on the functions of life in the air. Vegetable and animal existence, in its minutest forms, has exclusively a relation to the earth or to the waters as the scenes in which the development and propagation of such life is to have its place. When, therefore, we speak of life in the air, we desire simply to express the fact—and a wonderful fact it is—that the atmosphere is at all times charged with minute and invisible particles of organic existence, which, upon falling on the earth, or into the waters, spring at once into activity. Regarding the manner in which such minute organisms are received by the atmosphere, there prevails some difference of opinion and much obscurity. A number of circumstances are, however, on record, which show that the force with which bodies are lifted into the air is abundantly more than adequate to account for the elevation of such light particles as the germs of a microscopic plant or animal. The records of meteorology teem with instances of the transporting powers of aerial currents, which render the matter positively certain. Thus we are told that even fish and similar substances have been carried up into, and then precipitated from, the atmosphere. On the 9th of March, 1830, in the isle of Ula in Argyleshire, after a heavy rain, numbers of small herrings were found scattered over the fields: they were perfectly fresh, and some not quite dead. In a town in France, some distance from Paris, a violent storm took place, and when the morning of the day following broke, the streets were found strewn with fish of various sizes: the mystery was soon solved, for it was discovered that a fish-pond in the vicinity had been blown dry, and only the larger fish left behind. Dust, ashes, frogs, and other such bodies, have also been lifted into and dropped from the atmosphere at different times and in different places. What marvel, then, if the thin and delicate structures which form the life-beginnings of an animalcule or a fungus should be forever found floating around us, present under all circumstances, and ready, wherever opportunity offers, to drop and be developed into their highest activity?

We are too apt to regard the atmosphere as consisting only of air, forgetful of the innumerable organic particles—some living, or ready to live, and some dead—which float in the folds of its all-enveloping mantle. Humboldt's remarks regarding microscopic life in the air deserve extraction:—"Wheel-animalcules, and a host of microscopic insects, are lifted by the winds from the evaporating waters below. Motionless, and to all appearance dead, they float upon the breeze, until the dew bears them back to the nourishing earth, and, bursting the tissue which encloses their transparent rotating bodies, instils new life and motion

into all their organs. The yellow meteoric sand or mist (*dust nebule*) often observed to fall in the Atlantic, and not unfrequently borne in an easterly direction as far as Northern Africa, Italy, and Central Europe, consist, according to Ehrenberg's brilliant discovery, of agglomerations of siliceous-shelled microscopic organisms. Many of these float, perhaps for years, in the highest strata of the atmosphere, until they are carried down by the Etesian winds, or by descending currents of air, in the full capacity of life, and actually engaged in organic increase by spontaneous self-division. Together with these developed creatures, the atmosphere contains countless germs of future formations: eggs of insects and seeds of plants, which, by means of hairy or feathery crowns, are borne forward on their long autumnal journey. Even the vivifying pollen scattered abroad by the blossoms is carried by winds and winged insects over sea and land to the distant and solitary plant. Thus, whosoever the naturalist turns his eye, life, or the germ of life, lies spread before him." What an instructive lesson as to the universal presence of these minute invisible germs quick with life, and awaiting the combination of only a few simple circumstances to display their vital energies, is afforded us by simply exposing to the air a drop or two of water containing a very small proportion of organic matter in solution! It is one of the most wonderful spectacles in the world to behold, after a little lapse of time, the peopling up of this drop of fluid with living beings not to be seen in it before.

We shall content ourselves with a short review of a few of the more remarkable phenomena which reveal to us the fact, that the realms of air are peopled with germs and seeds of animal and vegetable life, which float upon every breeze, and are wafted up and down the heavens, round and about the earth. The history of the extraordinary tribe of fungi supplies many singular instances of the presence in the air of innumerable particles ready to burst into life immediately upon their alighting on a suitable matrix. Nothing, in fact, is more wonderful than the apparent omnipresence of fungus-germs in the air. A morsel of ripe fruit, a little water spilt on a crumb of bread, a drop of stale ink, a neglected bottle of medicine, afford ample evidence of the activity of this teeming life-world around us. In a very short time a delicate velvet-like covering envelops the decomposing mass, and presently acquires the utmost luxuriance of growth. What a scene is presented when we point the eye of the microscope to such objects! Myriads of delicate forms stand up in jaunty attitudes, rearing their delicate filaments over the decaying mass on which they are living in luxurious plenty. Beneath the observer's eye they multiply, they lengthen, they swell, they burst, and scatter their light and invisible germs into the ambient air! A wonderful race are the earth's scavengers—the fungi! Fries, the great fungologist, writing of them, says, "Their spores are so infinite, (in a single individual of *Reticularia maxima* I have reckoned above 10,000,000,) so subtle, (they are scarcely visible to the naked eye, and often resemble thin smoke,) so light, (raised perhaps by evaporation into the atmosphere,) and are dispersed in so many ways, (by the attraction of the sun, by insects, wind, elasticity, adhesion, &c.,) that it is difficult to conceive a place from which they can be excluded." Germs of minute fungi are in the air we breathe, for they have been

found living within the lungs of a living man: they are in the waters also, for a fungus envelops with its deadly folds the fish of our ornamental ponds, and suffocates them: they descend wherever an ingress presents into the bowels of the earth itself, for a luminous fungus lights the coal mines of Dresden, and turns the regions of darkness into the semblance of a begemmed and illuminated enchanter's palace.

The presence of minute forms of animal life in the air is not less certain than that of vegetables. The atmosphere at St. Domingo is described by Darwin as generally hazy, and this is attributed by him to the falling of an impalpably fine dust, which was found to have slightly injured the astronomical instruments. Darwin found no less than fifteen different accounts of dust having fallen on vessels when out in the Atlantic. From the direction of the wind whenever it has fallen, and from its having fallen during those months when the harmattan is known to raise clouds of dust high into the atmosphere, it appears probable that the dust chiefly comes from Africa. This dust, on microscopic examination, proved to consist in great part of infusoria, with some of the diatomacæ. Yet, singularly enough, Ehrenberg could not detect in it many of the infusoria peculiar to Africa, while he found in it two species which hitherto he knew as living only in South America. This organic dust is described as falling in such quantities as to render dirty every part of the ship, and to create much annoyance and inconvenience to the eyes. Vessels are said to have even run ashore, owing to the obscurity of the atmosphere. It has fallen on ships when several hundred, and even more than a thousand, miles distant from the coast of Africa. A somewhat similar phenomenon was witnessed at Genoa on the 16th of May, 1846. Dust fell from the atmosphere, after a storm, which was collected by Professor Pictet, and sent to Ehrenberg for microscopic examination. Ehrenberg found that it was in every respect identical with that met with off the Cape de Verd islands. Above forty species of microscopic infusoria were detected in it. Ehrenberg observes, that it is natural to suppose that these dust-clouds are of African origin; but they contain, besides continental infusoria, several marine organisms, which are met with only in seas, and never in fresh water.

The phenomenon of colored snow has long been familiarly known to those acquainted with popular science; and perhaps it may surprise some, who have been accustomed to look upon the cause of its color as of vegetable nature, to find it here noticed under the head of animal life in the air. It will be found, however, that both views—the vegetable and animal—of the coloring matter of red and green snow—are right when combined. Sir John Ross collected red snow upon a range of Arctic hills rising about 800 feet above the level of the sea, and Sir W. E. Parry found the same phenomenon when investigating these regions in 1827. He had previously observed that the impressions of the loaded sledges were of that color, but now he noticed that the footsteps of the party produced the same effect. Wherever heavy pressure was made upon the snow, the blood-like stain appeared, and every impression of their feet was tinged with crimson. Sometimes the color was paler, approaching to a salmon hue. In March, 1808, rose-colored snow fell in the Tyrol and Carinthia; and over Carnia, Cadore, Belluno, and Feltri, to the depth of nearly six feet. Green snow has also

occasionally been seen. It was observed by Martins, in Spitzbergen, under the following circumstances:—The surface of the snow was natural, but the impressions of their footsteps displayed a colored appearance, and a little depth below this the snow seemed as if it had been watered with a green decoction. When this snow was melted, the water was slightly tinged. The minute organization which all allow to be the cause of this phenomenon, must be present in such cases in innumerable numbers. Upwards of two millions and a half of these bodies are required to cover a surface not exceeding a square inch! The coloring matter has been by some considered to be a microscopic member of the vegetable family, the *Algae*, and has been called accordingly *Protococcus nivalis*. On evaporation of the snow upon a piece of white paper, the coloring matter was left in minute granules; and, on these being examined by a microscope, it was considered that distinct evidence of its vegetable nature was afforded. But the application of the same means of investigation has produced different results in other hands. In some red snow collected by Shuttleworth, above the line of perpetual congelation, he detected vast numbers of microscopic animals of exceeding minuteness and surprising agility. Several observers of the highest authority maintain that the supposed vegetable granules are in reality the ova of a rose-colored rotiferous animalcule. It has been suggested by Martins, that in all probability the truth lies midway; and he conceives the color to be due to the presence of innumerable vegetable cells enclosing fluid in which multitudes of infusoria find a nidus and support. The fact that the phenomenon, whatever its cause, reveals to us—namely, the existence of minute life in the highest regions of the air, and under circumstances where we should naturally suppose life and organization alike impossible—is of the highest interest.

Occasionally the indications of minute animal life in the air have assumed a more alarming character. The student of history must be familiar with the fact, that every now and then down the annals of time chroniclers have noted the appearance of blood-spots, or *signacula*, as they have been superstitiously called. One of the most graphic accounts of a phenomenon of this kind is contained in Dr. Merle d'Aubigné's recently-published work on the Reformation. "A widow, chancing to be alone before her house in the village of Castelen Schloss, suddenly beheld a frightful spectacle—blood springing from the earth all around her! She rushed in alarm into the cottage—but, oh horrible! blood is flowing everywhere—from the wainscot and from the stones! It falls in a stream from a basin on the shelf, and even the child's cradle overflows with it. The woman imagines that the invisible hand of an assassin has been at work, and rushes in distraction out of doors, crying murder! murder! The villagers and the monks of a neighboring convent assemble at the noise. They succeed in partly effacing the bloody stains; but a little later in the day, the other inhabitants of the house sitting down in terror to eat their evening meal under the projecting eaves, suddenly discover blood bubbling up in a pond, blood flowing from the loft, blood covering all the walls of the house! Blood, blood—everywhere blood! The bailiff of Schenkenberg and the pastor of Dalheim arrive, inquire into the matter, and immediately report it to the lords of Berne and to Zuingli!" It is very evident that there is much in this account



which is overdrawn. It is plain, for example, that the bubbling up of blood in the pond, and its flowing over the basin and cradle, are mere figures of speech. Such never actually took place. A blood-like appearance was seen on and within the basin, and in the pond, and on the ground; but that was all. Evidently considerable alarm was excited: and fear, with dilated vision, saw more than nature presented. The cause of these blood-like spots has been generally considered to be found in the abundant and excessive development under peculiarly favorable circumstances, of a little monad (*Monas prodigiosa*.) It is always an unsatisfactory course to set down as false certain wonderful phenomena reported by history; and the microscope, among other instruments of science, comes acceptably to our aid. It admits the phenomenon, and explains the circumstances under which it is naturally conceivable it might have taken place.

Relinquishing the further consideration of these mysterious microscopic animal and vegetable worlds, it becomes us to inquire for what end they appear to have been created. For what wise purpose has He, who makes naught in vain, peopled the waters, the earth, and the air with hosts innumerable of invisible animals and plants? It is to be confessed we are really ignorant. The conception, that they have relation to the minute organic particles of matter which abound in these kingdoms of nature—that they feed upon, and thus remove, these effete atoms, preparing them for again entering into the round of animal or vegetable vitalities—deserves consideration, and may be accepted for want of a better and more perfect understanding of the true and proper functions of microscopic life. Professor Owen well expresses this idea in his lectures on the invertebrata. "Consider," he observes with reference to the infusorial animalcules, "their incredible numbers, their universal distribution, their insatiable voracity, and that it is the particles of decaying vegetable and animal bodies which they are appointed to devour and assimilate. Surely we must in some degree be indebted to these ever-active, invisible scavengers for the salubrity of our atmosphere. Nor is this all; they perform a still more important office in preventing the gradual diminution of the present amount of organized matter upon the earth; for when this matter is dissolved, or suspended in water, in that state of comminution and decay which immediately precedes its final decomposition into the elementary gases, and its consequent return from the organic to the inorganic world, these wakeful members of nature's invisible police are everywhere ready to arrest the fugitive organized particles, and turn them back into the ascending stream of animal life. Having converted the dead and decomposing particles into their own living tissues, they themselves become the food of the larger infusoria, and of numerous other animals; and thus a pabulum, fit for the nourishment of the highest organized beings, is brought back by a short route from the extremity of the realms of organized matter. These invisible animalcules may be compared in the great organic world to the minute capillaries in the microcosm of the animal body, receiving organic matter in its state of minutest subdivision, and when in full career to escape from the organic system, and turning it back by a new route towards the central and highest point of that system." Dr. Young wrote, "How populous, how vital is the grave!" The microscope tells us how populous and vital is the entire earth—how life rises into the lofty regions

of the air, and descends into the bowels of the earth, and into those profound abysses of the ocean where no eye but that of Him who formed these wonderful organisms can behold them in their fulfilment of the functions of their existence.

Before drawing our sketch of the microscope and its marvels to a close, it may furnish a practical illustration of the value of this instrument for the purposes of science, and indeed for those of commerce, if we supply a few notes relative to its application in these ways. A remarkable evidence of its applicability to the purposes of geological research, and an interesting illustration of the connectedness of narrative which an acute naturalist can form out of the most slender materials, is supplied to us in the celebrated discovery by Professor Owen of the phyllophagous or leaf-eating giants of the South American forests, who could uproot and haul down the loftiest members of a tropical forest, and at their ease strip them of their foliage—from the fragment of a tooth! An interesting and popularly intelligible account of this remarkable discovery, and of the method of its accomplishment, has been given by Dr. Carpenter, the substance of which well admits of reproduction in these pages. It is necessary to state that the manner in which the microscope led to this discovery was as follows:—When a human tooth is cut perpendicularly downwards, and examined, the following structures are disclosed; the great mass of the tooth consists of a hard, bony substance, resembling ivory, and called dentin. External to this is a layer of much harder material, forming what is termed the enamel. The dentin is characterized, on microscopic examination, by the passing of a series of tubes through its structure. Now, the arrangement of the structure of the teeth of different animals is by no means the same; and this difference in the arrangement of its structure constitutes, therefore, an important means of discovering to what group of animals any particular tooth may happen to belong. Seeing that such arrangement is always constant for the same group, we become enabled, on using the microscope, to determine with some precision to which group the animal from which the specimen of dentin was taken originally belonged. Thus a fragment of a tooth, examined by this beautiful apparatus, conveys to us the most satisfactory knowledge as to the character of its possessor, even though we should be in possession of no other part of its body than a fragment of its tooth, which might not exceed the twelfth of an inch in size! The teeth of the megatheria—that great extinct race of sloths, transcending in size the modern sloths as much as an elephant a pig—have their peculiar type. The tooth is continually growing from a pulp at the base, so as to repair the waste of material caused by its constant employment. Its structure, on examination with the microscope, was discovered to be precisely analogous to that of the sloths of the present day. The tooth was not calculated to grind down very hard substances, and the present race of sloths are well known to live upon the soft shoots and leaves of trees.

Let us now trace this ingenious process of scientific induction, and see what had been established. The fossil tooth, on examination by the microscope, proved that its possessor belonged to the family of sloths. But its enormous size, in comparison with the teeth of recent sloths, also proved that the creature must have been vastly superior to the present sloths in size and strength. The tooth was a vegetable-crushing sort of tooth, not hard enough

to grind down roots, but very suitable to crush leaves and sappy shoots; consequently, as modern sloths live upon such a pabulum, so must also this ancient monster, despite his immense size. But now arose a new difficulty. How was this enormous brute to climb trees in order to get at their tender shoots and leaves? What tree could support so great a weight? Reasoning upon these facts, and upon the habits of the animal, Professor Owen was led to work out a most curious train of investigation, which led to the most complete history of the habits of any fossil animal differing so widely from the animals of the present time that has been ever given to the world, from the material supplied to the anatomist. By its enormous digging-forefeet (for there was no question that they were organized for digging) it burrowed down and excavated beneath the roots of trees, and then rearing itself up upon its hind-legs and tail, as upon a tripod, it pushed against the tree, swaying backwards and forwards until the tree fell; then it browsed upon the leaves and young shoots, until it had completely stripped them.

The most curious part of the tale has yet to be told. Professor Owen was explaining to Dr. Buckland, who advocated the theory that the megatherium fed upon roots, his views upon the subject, when the latter remarked that if the new account of its habits were correct, then very probably the animals would be killed by the fall of the trees. Professor Owen replied that their gigantic strength might possibly push the tree down in a direction from them, and that they would have sufficient instinct to get out of the way. Singularly enough, the very next specimen that was brought home from South America, and now deposited in the museum of the Royal College of Surgeons, showed a *very large fracture in the skull of the animal*—a fracture of such a kind as to prove that it had taken place during the life of the animal, and had reunited again. The fracture was one the animal must have received from such an accident as a tree falling upon its head; but being provided with a very thick skull, of which the brain only formed a small portion, it escaped vital injury, perhaps lay insensible for a time, but afterwards led a long and active life, and probably died from some different cause.

The wide range of palæontological and geological science to which the microscope may be made to render service, cannot be better indicated than in the words of that philosopher who experienced this remarkable success in its employment. "When," he observes, "we submit to the microscope the structure of a piece of drift-wood, buried from ancient times in the eocene clay deposits of the great estuary of the diminished but still noble river, the Thames, that flows past our metropolis—when conditions of the vegetable structure are detected in the fossil, to which the nearest approach is made in the ligneous tissue of that family of plants from which the pepper of commerce is obtained—do we not derive from such a comparison a conviction that these primeval *Piperaceæ* must have coëxisted with the vultures, turtles, crocodiles, and boa-constrictors of Sheppey, under atmospherical conditions more nearly approaching to those of a tropical climate than any dependent on the mere equalization of temperature, little if at all superior, in the average, to that which now prevails in the south of England? And if the microscope is thus essential to the full and true interpretation of the vegetable remains of a former period, it is not less indispensable to the investigation of the fossilized parts of

animals. By the microscope the supposed monarch of the saurian tribes, the so called *Basilosaurus*, has been deposed, and removed from the head of the reptilian to the bottom of the mammiferous class. The microscope has degraded the *Sauropsophus* from the class of reptiles to that of fishes." In fact, the hammer and the blow-pipe are not so essential to the geologist as is the microscope; and there can be little question that advancing time will display still newer and more extraordinary evidences of the vast fund of information upon the sciences in question this apparatus is capable of opening up.

At the meeting of the Microscopical Society, on April 26, 1848, a most curious paper was read, by Mr. J. Quekett, upon the application of the microscope to a very singular sort of antiquarian research. Early in the month of April, 1847, Mr. Quekett was asked by Sir Benjamin Brodie whether it were possible to determine if skin, which had for many years been exposed to the air, were human or not? He replied in the affirmative, if any hairs were present. It was then mentioned that Mr. Albert Way was very desirous of ascertaining whether certain specimens of skin, stated to have been taken from persons who had committed sacrilege, and which for centuries had been attached to the doors of churches, were unequivocally human. Subsequently, a communication from Mr. Way, containing a specimen of skin, together with an account of the tradition which narrated the circumstances of its having been taken, was made to Mr. Quekett. The tradition, which resembles many others of a similar kind, exists in Worcester, that a man, having been caught in the act of committing robbery in the cathedral, was flayed, and his skin nailed upon the doors, as a terror to the sacrilegious. The doors have been recently replaced by new ones, but they are still to be seen, and a portion of the skin, which was found under the iron hinges and clamps of the door, was submitted to microscopical examination. With a power of a hundred diameters, it was found that the skin was really human, as it had two hairs on its surface; and very probably the unfortunate wretch from whom it had been taken had light hair! A piece of skin, traditionally given to a Danish pirate, existed for nine hundred years on a door of a church in Essex. In 1848, the microscope revealed the fact, that it was in all probability taken from the back of the Dane, and that he, too, was probably a light-haired individual. A more singular application of this instrument than that in question can scarcely be imagined. Besides showing its great scientific value in bringing to light otherwise hidden truths, these specimens establish the wonderful power of skin and hair to withstand for centuries atmospheric influences, and serve to point out that, next to the bones, they are the most durable parts of the human frame.

It might be thought that the science of chemistry was in itself complete, and needed no extraneous assistance; that the tests with which it has furnished itself are sufficient for all the purposes of scientific inquiry. And there can be little doubt that such is the case by any who have made themselves familiar with the progress of this splendid system of knowledge of late years. Yet while this is admitted, the microscope promises to furnish the chemical philosopher with a test-apparatus not inferior in the instances in which it is applicable to any with which he is acquainted. We can state from experience, that the corroborative testimony furnished by this instrument in chemical investigation is of the highest value. L. J. Ke

a simple instance. Some years since a continental professor of medical jurisprudence discovered the remarkable fact, that by certain manipulation small strips of copper ribbon might be made to supply a most delicate test for the presence of the acrid and virulent poison, arsenious acid—in common language, arsenic. The chemist whose aid was called in in a case of suspected poisoning, had simply to take some of the poisoned food or contents of the alimentary canal, apply his strips of copper ribbon, afterwards collect the latter and dry them, and he would be able in the course of a few minutes to ascertain the guilt or innocence of the suspected party, and in the following singular but simple way:—the strips of copper were put into a clean glass tube, the flame of a spirit-lamp was applied to the bottom of the tube, and in a few minutes the arsenic, if any were present, crystallized in a brilliant zone around the upper end of the tube. Now, arsenious acid forms very beautiful crystals of an octohedral figure. The application of a microscope to this zone finished the proof—the octohedral figure became splendidly conspicuous—the evidence was complete. We have repeated these experiments many times, and the evidence thus afforded by the microscope has always appeared to us one of the most satisfactory of any in the whole range of chemical investigation.

Dr. John Davy, in a paper written in 1846, and published in the "Edinburgh New Philosophical Journal," and other periodicals, says that in his belief the time is not far distant when the philosophical chemist will require the microscope as much as, and even more frequently than, the balance, and that the one will be considered as essential to a laboratory of research as the other; and to the inquiring traveller, limited as to apparatus, more useful than any other single implement that can be mentioned hitherto attainable. Particularly in affording preliminary information as to the nature of the subject under investigation, this instrument will prove of the highest value. An instance of its application in this way is given by the same author. It is a disputed point whether those peculiar, and in many respects singular birds, the humming-birds, feed on insects or the sweet juice of flowers—some naturalists maintaining that they live exclusively on the one, others that they live exclusively on the other. By repeated observation—first microscopical, afterwards chemical—made on the contents of their minute stomachs, Dr. Davy ascertained that insects are their solid food, and that the sweet juice of the nectary of the flowers is the ordinary drink of these birds. The tongue of the humming-bird, projectile and bifid, is peculiarly fitted for taking insects; and when moist with a honeyed viscid lure its power is even increased. In every stomach of this bird that Dr. Davy examined, he detected with the microscope parts of insects, and sometimes entire and living ones.

It appears that M. Orfila, the renowned toxicologist, was one of the first to apply the microscope to the elucidation of questions connected with medical jurisprudence. A very curious evidence of its importance in those investigations in which the science of medicine has to be united with the study of the law occurred in France, in 1837. A murder had been committed under peculiar circumstances, and the corpse was found covered with blood, and wounded in several places. The murderer was wholly unknown. Suspicion at length fell upon an individual, whose house was immediately searched

for evidences of the deed. But nothing was found calculated to implicate this person beyond a hatchet, on which were some stains and a few hairs. It was thought that a clue was now obtained to the discovery of the murderer, and the hatchet was submitted to microscopical investigation. M. Ollivier undertook the task, and in a short time he confidently declared, that so far as this evidence against the individual went, it was futile. The hairs proved, on examination, to belong to an animal, and not to man. The events of the trial fully confirmed this, and the evidence fell to the ground. At another period, it may be easily imagined how poor would have been the suspected person's chance of escape, against whom circumstantial evidence of such a nature could be brought! To the microscope, it is scarcely too much to say, this person was indebted not only for the declaration of his innocence, but for the preservation of his life. From a difference which physiologists well know to exist between the blood globules of animals and those of man, it would be possible by the assistance of the microscope to ascertain whether the blood on a dagger were human or animal, and thus to establish the fact whether or not it had been innocently or guiltily employed.

Some years ago it was publicly announced in Paris, that the milk-dealers in that city were adopting a wholesale system of adulterating milk, and one on an entirely new principle. It was stated that these ingenious artists—for so they must be called—first removed the cream of the milk, and then, in order to restore the richness of the fluid, added a certain quantity of the brain of the calf or sheep. This was afterwards denied by the paper that at first announced it, but failed to quiet a great portion of the population of Paris, who were thrown into great excitement about it, as the use of milk is almost universal among all classes. It became, therefore, of extreme importance to discover whether this adulteration actually took place. M. de Chaubry, in a memoir read before the Royal Academy of Medicine, asserted that by means of the microscope this adulteration, when present, could be certainly detected. When the brainy matter of the sheep or calf is added either directly to the milk, or in emulsion with water in the proportion of 5 per cent., the physical properties of the milk—its odor, savor, color, and density are not so notably altered as to allow the adulteration to be at once perceived. But on microscopic examination the foreign matter was immediately detected. On employing a power of from 300 to 500 diameters, fragments of tubes known to form part of the cerebral substance were seen by the side of the ordinary milk globules. MM. Soubeiran and Henry confirmed these results; and it is to be hoped that the inhabitants of Paris reaped the benefit of the microscopical discovery. It may be interesting to a portion of our readers, to be informed that the instrument has been applied to milk for other purposes. M. Duvergie has written an interesting paper in the "Bulletin de l'Académie Royale de Médecine de Paris," on the microscopical examination of milk—with a view to the selection of nurses. His report has shown that there is great variety in the nutritive properties of the milk of different nurses, and points to an easy and simple method of ascertaining which is the best. The microscope has thus been called in as a mother's aid for her infant, and it has been determined by its means which of a number of candidates for the office of nurse should be selected. This is a discovery of great and prac-

tical importance, and one of which English medical men would do well to avail themselves in special cases.

The merchant is beginning also to appreciate the wonderful powers of discrimination furnished to him by this instrument. There can be no question that a most extensive system of adulteration is in practice in foreign countries, exporting their products for consumption in our own. Our tea is adulterated; our sugar is likewise largely adulterated; and, as to drugs, it is a matter of extreme difficulty to procure really pure, unsophisticated articles. It may be important also to the agriculturist, to inform him that the new manure, guano, is almost constantly adulterated; and that of this fact, as to many of the others, the microscope may be made instrumental in the detection. Mr. E. J. Quekett has recently shown that it is perfectly possible to distinguish the Ichaboe guano from the Peruvian, while adulterations may with facility be almost immediately detected in it. The microscope has also been successfully employed in determining the composition of various fabrics. Thus armed, the purchaser can determine whether what he buys for linen cloth is really made of flaxen fibre, or of a mixture of cotton and flax. In short, we are only at the commencement of a series of applications of this valuable instrument, which will in a short time become necessary to many who at present disregard its assistance. Medical men have long perceived its value; and it may truly be said, that to members of this profession we are indebted for many of our most valuable microscopic researches. "In conclusion," observes Dr. Davy in the paper before quoted, "this, it appears to me, may justly be said in commendation of the microscope in all its applications, that its tendency is equally to facilitate and increase the accuracy of observation, and hence to remove vagueness and give precision of views, and at the same time to add wonderfully to the interest of inquiry and to extend its sphere—in this respect having an influence in relation to subjects for chemical (and, it may be added, for scientific) research resembling that of the most powerful telescopes in relation to the objects of astronomical research, both conducing, the one hardly less than the other, by the phenomena they display, to excite in the mind of the philosophical inquirer feelings of admiration and of awe, and not less of humility."

No person can lay down the sketch we have here attempted to portray of the extent, importance, and variety of minute existence surrounding us, without feeling that the microscope has brought man into relation with a new world of organization—a world quick with vital energy, inconceivably abundant, and incessantly active. Galileo, Newton, and Herschel, have introduced man to the knowledge of a world of worlds infinitely great, glorious, and all-extending. But the instrument in question lays open to us a yet more wonderful field of study, and informs us of the existence of millions of minute beings, of which the unheeding multitude are as entirely ignorant as though they had never been created. The emotions which researches such as these excite in the mind are at once deep and humbling. "When," says Humboldt, "the active spirit of man is directed to the investigation of nature, or when, in imagination, he scans the vast fields of organic creation, among the varied emotions excited in his mind there is none more profound or vivid than that awakened by the universal profusion of life." And truly it is to the

microscope that we are indebted for the results which such investigation has supplied. The life it reveals is unbounded—in the air, in the earth, and in the waters; alike under the genial influences of a tropical sun and the chilling frosts of a polar winter; in the living tissues of plants and animals, as well as on their decaying remains; and not unfrequently operating with such activity, and in such myriadfold force, that creatures in themselves insignificant elaborate results which rank among the grandest phenomena of nature.

**A LONG YARN**—Some twenty-five or thirty years ago, Mr. Thomas Houldsworth, M. P., connected with one of the largest spinning establishments in the world, succeeded in spinning one pound of cotton wool into 300 hanks, equal to nearly 150 miles, which at that time was considered the *ne plus ultra* of machinery. What progress the spinners of Manchester have made since then may be learned from the fact that a certain establishment in that town intends to send a pound of cotton for the Exhibition of 1851, which shall contain 500 hanks, and will measure no less than 238 miles.

**RAILWAYS IN THE LAND OF PHARAOH.**—The iron railway, with its magic-like facilities, is about to penetrate into Egypt, that ancient wonder-land. Robert Stephenson, the celebrated engineer, is there at present, taking a survey of the Suez desert, with a view to ascertain what the cost would be of a railway between Suez and Cairo.

From Fraser's Magazine.

#### A CAROL FOR THE TIMES.

O OYEZ ! O oyez ! good folk that have read  
In many a querulous page  
How all things are senseless, and soulless, and dead  
In this utilitarian age.  
'T is Young England that bids us remember  
How Christmas, that jovial time,  
Is bereft, like the woods in December,  
Of the honors it wore in its prime ;

No mummeries in church, or out of it either,  
Good Christian folk moping to death,  
While Religion and Romping are vanished together,  
And Fun made its exit with Faith.  
"Die traffic," chirp parsons in chorus,  
As the scion of Rutland hath sung ;  
"Die learning and laws, but restore us  
The days when Old England was Young ;

"When the serf pledged his lord to the same loyal  
toast,  
And drank from the same bonny bowl ;  
And the baron's hall-fire was sufficient to roast  
An ox—or a heretic—whole.  
And gayly the mistletoe threw they,  
And the maidens were kissed by the men,  
And dreamed not of mischief, for knew they  
No prurient prudery then.

"Seek mistletoe, boys, in the bright winter's morn,  
Through orchard, and forest, and dell ;  
Or at least gather holly—the girls, I'll be sworn,  
Will take to the kissing as well.  
And we'll fetch for this festival season  
From Downing Street Lords of Misrule,  
From St. George's our Abbot Unreason,  
And — shall be privileged Fool."

W. G. C.



From Tait's Magazine.

## COLDS AND COLD WATER.

Who has not had a cold? or, rather, who has not had many colds? Who does not know that malady which commences with slight chilliness, an uneasy feeling of being unwell, which does not justify abstinence from the ordinary business and occupations of the day, but deprives one of all satisfaction and enjoyment in them, and takes away all the salt and savor of life, even as it deprives the natural palate of its proper office, making all things that should be good to eat and drink vapid and tasteless? Who does not know the pain in the head, the stiff neck, the stuffy nose, the frequent sneeze, the kerchief which is oftener in the hand than in the pocket? Such, with a greater or less amount of peevishness, are the symptoms of the common cold in the head; which tortments its victim for two or three days, or perhaps as many weeks, and then departs, and is forgotten. Few people take much notice of colds; and yet let any one, who is even moderately liable to their attacks, keep an account of the number of days in each year when he has been shut out by a cold from a full perception of the pleasures and advantages of life, and he will find that he has lost no inconsiderable portion of the sum total of happy existence through their malign influence. How many speeches in parliament and at the bar, that should have turned a division or won a cause, have been marred because the orator has had a cold, which has confused his powers, stifled his voice, and paralyzed all his best energies! How many pictures have failed in expressing the full thoughts of the artist, because he has had a cold at that critical stage of the work when all his faculties of head and hand should have been at their best to insure the fit execution of his design! How many bad bargains have been made, how many opportunities lost in business, because a cold has laid its leaden hand upon them, and converted into its own dull nature what might have resulted in a golden harvest! How many poems—but no: poetry can have nothing in common with a cold. The muses fly at the approach of flannel and watergruel. It is not poems that are spoiled, but poets that are rendered of impossible existence by colds. Can one imagine Homer with a cold, or Dante? But these were southerners, and exempt by climate from this scourge of the human race in Boreal regions. But Milton or Shakspeare, could they have had colds? Possibly some parts of "Paradise Regained" may have been written in a cold. Possibly the use of the handkerchief in "Othello," which is banished as an impropriety by the delicate critics of France from their versions of the Moor of Venice, may have been suggested by familiarity with that indispensable accessory in a cold. Colds are less common in the clear atmosphere of Paris than in the thick and fog-laden air of London; and this may account for the difference of national taste on this point. It is said of the great German Mendelssohn, that he always composed sitting with his feet in a tub of cold water. This was not the musician, but his grandfather, the metaphysician, and father of that happy and contentedly obscure intermediate Mendelssohn, who used to say, "When I was young, I was known as the son of the great Mendelssohn; and now that I am old, I am known as the father of the great Mendelssohn." But who ever was known to compose anything while sitting with his feet in a tub of hot water, and with the composing draught standing on the table at his side, to remind him that in the matter of composition he is to be a passive, and not an active, subject? How many marriages may not have been prevented by colds! The gentleman is robbed of his courage, and does not use his opportunity for urging his suit; or the lady catches a cold, and appears blowing her nose, and with blanched cheeks and moist eyes:—

The sapphire's blue within her eyes is seen;  
Her lips the ruby's choicest glow disclose;  
Her skin is like to fairest pearls, I ween;  
But ah! the lucid crystal tips her nose.

And so the coming declaration of love is effectually nipped in the bud by the unromantic realities of the present catarrh.

Napoleon, as is well known, lost the battle of Leipsig in consequence of an indigestion brought on by eating an ill-dressed piece of mutton; and Louis Philippe, in February, 1848, fled ignominiously from the capital of his kingdom because he had a cold, and could not use the faculties which at least might have secured for him as respectable a retreat to the frontier as was enjoyed by his predecessor, Charles the Tenth. He might have shown fight; he might have thrown himself upon the army, or upon the National Guard; he might have done a hundred things better for his own fame, rather than get into a hack cab and run away. But it was not to be: Louis Philippe had the influenza; and Louis Philippe with the influenza was not the same man who had shown so much craft and decision in the many previous emergencies of his long and eventful life. Louis Philippe, without a cold, had acquitted himself creditably in the field of battle, had taught respectably in schools, had contrived for himself and his family the succession to a kingdom, had worked and plotted through all the remarkable events with which his name is associated, and by which it will ever be remembered in the romance of history; but Louis Philippe, with a cold, subsided at once and ingloriously into simple John Smith in a scratch-wig.

Of places in which colds are caught it is not necessary to be particular. For, as a late justice of the Court of Queen's Bench laid it down in summing up to a jury, in a case of sheep-stealing, after some time had been wasted in showing that the stolen sheep had been slaughtered with a particular knife—any knife will kill a sheep—so it may be said that a cold may be caught anywhere: on the moor or on the loch; travelling by land or by water; by rail or by stage; or in a private carriage, or walking in the streets; or sitting, at home or elsewhere, in a draught or out of a draught, but more especially in it. Upon a statistical return of the places in which colds have been caught, by persons of both sexes, and under twenty-one years of age, founded upon the answers of the patients themselves, it appears that more colds are caught upon the journey in going to school, and at church, than at the theatre and in ball-rooms. Upon a similar return from persons liable to serve as jurymen in London and Middlesex, it appears that a majority of colds are caught in courts of justice; to which statement, perhaps, more confidence is due than to the former, as it is not known that Dr. Reid has ventilated any of the churches or theatres in the metropolis. Indeed, if the ancient physical philosophers, who had many disputes upon the first cause of cold, had enjoyed the advantage of living in our days and country, they might have satisfied themselves on this matter, and at the same time have become practically acquainted with the working of our system of jurisprudence, by attending in Westminster Hall, when they would go away perhaps with some good law, but most certainly with a very bad cold in their heads. Upon the returns from ladies with grown-up daughters and nieces, it appears, from their own statements, that more colds are caught at evening parties than anywhere else; which is in remarkable discrepancy with the statements of the young ladies themselves, as before mentioned. The same curious want of agreement is found to prevail as to the number of colds caught on water-parties, picnics, archery-meetings, and the like, which, according to one set of answers, never give rise to colds, but which would certainly be avoided by all prudent persons if they gave implicit belief to the other.

Of the remedy for colds something may now be said. As with other evils, the remedy may exist either in the shape of prevention or of cure, and of course should be most sought after, by prudent people, in the former. Much ancestral wisdom has descended to us in maxims and apothegms on the prevention and management of colds. Like other venerable and traditional lore which we are in the habit of receiving without questioning, it contains a large admixture of error with what is really good and true; and of the good and true much occasionally meets with undeserved disparagement and contempt. Our grandmothers are right when they inculcate an active avoidance of draughts of air, when they enjoin warm clothing, and especially woollen stockings and dry feet. Their recommendation of bed and slops is generally good, and their "sentence of watergruel" in most cases is very just, and better than any other for which it could be commuted; but when they lay down the well-known and authoritative dogma, stuff a cold and starve a fever, they are no longer to be trusted. This is a pernicious saying, and has caused much misery and illness. Certain lovers of antiquity, in their anxiety to justify this precept, would have us to take it in an ironical sense. They say, stuff a cold and starve a fever: that is, if you commit the absurdity of employing too generous a diet in the earlier stages of a cold, you will infallibly bring on a fever, which you will be compelled to reduce by the opposite treatment of starvation. This, however, may be rejected as mere casuistry, however well it may be intended by zealous friends of the past. Our British oracles were not delivered in such terms of Delphic mystery, but spoke out plain and straightforward; and even this one permits of some justification without doing violence to the obvious meaning of the words. For every cold is accompanied with some fever, the symptoms of which are more or less obvious, and it indicates the presence in the system of something which ought not to be there, and which is seeking its escape. Every facility should be given to this escape which is consistent with the general safety of the system. We may reasonably leave a window open, or a door upon the latch, to favor the retreat of a disagreeable intruder, but we should not be willing to break a hole in the wall of the house. All the remedies of hot water for the feet, warming the bed, exciting gentle perspiration, are directed to this object. Occasionally, the excitement of an evening passed in society, especially if there is dancing, and in a room of somewhat elevated temperature, is sufficient to carry off an incipient cold. So a cold may be stopped, *in limine*, by the use of a few drops of laudanum; and so, perhaps, the stimulus of some slight excess in eating or drinking may operate to eject the advancing cold before it has completely lodged itself in the system. But this is dangerous practice, and the same object may be effected far more safely and surely by the common nursing and stay-at-home remedies.

Of all prophylactic or precautionary measures (in addition, of course, to prudent attention to dress and diet) the best is the constant use of the cold bath. It is only necessary to glance at the ironmongers' shops to see that of late years the demand for all kinds of washing and bathing apparatus has much increased, and that many persons are aware of the importance of this practice. The exact method of applying the cold element must depend on the constitution of the patient. For the very vigorous and robust, the actual plunge-bath may not be too much; but few are able to stand this, for the great abstraction of animal heat by the surrounding cold fluid taxes the calorific powers of the system severely; nor is a convenient swimming or plunge-bath generally attainable. A late lamented and eminent legal functionary, who lived near the banks of the Thames, bathed in the river regularly every morning, summer and winter, and, it

is said, used to have the ice broken, when necessary, in the latter season. He continued this practice to a good old age, and might have sat for the very picture of health. The shower-bath has the merit of being attainable by most persons, at any rate when at home, and is now made in various portable shapes. The shock communicated by it is not always safe; but it is powerful in its action, and the first disagreeable sensation after pulling the fatal string is succeeded by a delicious feeling of renewed health and vitality. The dose of water is generally made too large; and by diminishing this, and wearing one of the high-peaked or extinguisher caps now in use, to break the fall of the descending torrent upon the head, the terrors of the shower-bath may be abated, while all the beneficial effects are retained. It has, however, the disadvantage of not being easily carried about during absence from home, and the want of it is a great inconvenience to those who are accustomed to use it. None of the forms which are really portable are satisfactory, and all occupy some time and trouble in setting up and taking down again, unless, indeed, you are reckless of how and where you fix your hooks, and of the state of the floor of the room after the flood has taken place, and perhaps benevolently wish that the occupants of the room beneath should participate in the luxury you have been enjoying. For nearly all purposes the sponge is sufficient, used with one of the round flat baths which are now so common. Cold water, thus applied, gives sufficient stimulus to the skin, and the length of the bath, and the force with which the water is applied, are entirely under command. The sponging-bath, followed by friction with a rough towel, has cured thousands of that habitual tendency to catch cold which is so prevalent in this climate, and made them useful and happy members of society. The large tin sponging-bath is itself not sufficiently portable to be carried as railway luggage, but there are many substitutes. India-rubber has been for some time pressed into this service, either in the shape of a mere sheet to be laid on the floor, with a margin slightly raised to retain the water, or in a more expensive form, in which the bottom consists of a single sheet of the material, while the side is double, and can be inflated so as to become erect, in the same manner as the India-rubber air-cushions. Either form may be rolled up in a small compass. The latter gives a tolerably deep bath, capable of holding two or three pails of water; but it is not very manageable when it has much water in it, and must be unpopular with the housemaids. As there is no stiff part about it, it is difficult, or rather impossible, for one person to lift it for the purpose of emptying the water; and the air must be driven out before it can be packed up again, which occasions a delay which is inconvenient in rapid travelling. Besides, on the Continent at least, where the essential element of water is not to be had except in small quantity, the excellence of holding much is thrown away. Travelling-boxes have lately been made of that universal substance, gutta-percha, which serve the double duty of holding clothes or books on the road, and of baths in the bedroom. The top can be slipped off in a moment, and is at once available as a bath; and whenever the whole box is unpacked, both portions can be so employed. But the one disadvantage which prevents gutta-percha from being adopted for many other purposes tells against it here. It becomes soft and pliable at a very low temperature, which unfits it for hot climates, and for containing hot water in our own temperate regions. There is also the danger of burning or becoming injured by the heat, if left incautiously too near the fire. But for this drawback, it seems as if there was nothing to prevent everything from being made of gutta-percha. It is almost indestructible, resists almost all chemical agents, and is easily moulded into any required form. But, like glass, it has its one fault. Glass is brittle—gutta-percha cannot resist moderate heat; and, but for this,

these two materials might divide the world between them. It is related that a certain inventor appeared before the Emperor Tiberius with a crystal vessel, which he dashed on the pavement, and picked up unhurt; in fact, he had discovered malleable glass, the philosopher's stone of the useful arts. His ingenuity did not meet with the success it deserved; for the emperor, whether alarmed at the novelty, and wishing to protect the interests of the established glass-trade, or wishing to possess the wonderful vase, and to transmit it in the imperial treasure-chambers as an unique specimen of the manufacture, immediately ordered his head to be cut off, and the secret perished with him. Any one who re-discovered it, or could communicate to the rival vegetable product the quality of resisting heat, would make his fortune; and although he might find the patent-office slow and expensive, would now-a-days be better rewarded by a discerning public than his unfortunate predecessor was by the Roman tyrant. But to return to our baths; a very good portable article may be made by having a wooden travelling-box, lined with thin sheet zinc. It may be of deal or elm, and painted outside. The lid may be arranged to slip on and off, like the rudder of a boat, on eyes and pintles, or on common sliding hinges; and there may be a movable tray, three or four inches deep, to be lined also with zinc, which serves for holding the immediate dressing-apparatus, and all that need be taken out for a single night's use. This tray, together with the lid laid side by side on the floor, makes a fair enough sponging-bath; and if the box itself is placed between them, and half-filled with water, a most luxurious bathing apparatus is at once established. The zinc lining should be painted, or, what is still better, japanned; and the lock should open on the side of the box, and be fitted with a hinged hasp, which can be turned up, out of the way, upon the side of the lid, when it is detached and in use as a bath. The lock should not open upwards in the edge of the box, or the water might enter it, and damage the wards; and the hasps sticking up from the edge of the lid would be in the way. A box on this plan has been made, and has been in use for some months with perfect success, and may possibly be exhibited for the instruction of foreigners in the Great Exposition of 1851. The only objection is the increased weight arising from the metallic lining; and this might be removed by employing sheet gutta-percha in its place, or by relying on good workmanship and paint alone to keep the box water-tight. The gutta-percha would, in this case, be supported by the wood of the box, and could not get out of shape; but it still would be liable to injury if used with warm water.

Little need be said of sponges. The best fetch a high price, but are probably most economical in the end; for a good sponge, used only with cold water, will last a long time. There is an inferior kind of sponge, very coarse, ragged, and porous, which formerly was not sold for toilet use, but which is now to be found in the shops, and is sold especially for use in the sponging-bath. It is much cheaper than the fine sponge; and readily takes up, and as readily gives out again, a large quantity of water; and, on the whole, may be recommended. Our old friend, India-rubber, appears again as the best material of which the sponge-bag can be made. Oil-skin is efficient while it lasts, but it is very easily torn; and sponges are apt to be impatiently rammed into their bags in last moments of packing.

Armed with his sponge and his portable bath, a man may go through life, defying some of its worst evils. Self-dubbed a Knight of the Bath, he may look down with scorn upon the red ribands and glittering baubles of grand crosses and commanders, and may view with that calm philosophy to which nothing so much contributes as a state of high health the chances and changes of a surrounding world of indigestions

and catarrhs. With his peptic faculties in that state of efficiency in which the daily cold affusion will maintain them, he will enjoy his own dinners; he will not grudge his richer neighbor his longer and more varied succession of dishes, and he will do his best to put his poorer one in the way to improve his humbler and less certain repast. With his head and eyes clear and free from colds, he will think and see for himself; and will discern and act upon the truth and the right, disregarding the contemptuous sneezes of those who would put him down, and the noisy coughs of those who would drown his voice when lifted up in the name of humanity and justice.

GEORGE THE THIRD'S LIBRARY.—The library of 120,000 volumes, which George IV. presented to the nation, and which has since gone to swell the collection at the British Museum, (as I have been assured by several persons to whom the whole history of the library, and its growth from small rudiments, was familiarly known,) was collected under the direct personal superintendence of George III. It was a favorite and pet creation; and his care extended even to the dressing of the books in appropriate bindings, and (as one man told me) to their health; explaining himself to mean, that in any case where a book was worm-eaten, or touched, however slightly, with the worm, the king was anxious to prevent the injury from increasing, and still more to keep it from infecting others by close neighborhood; for it is supposed by many that such injuries spread rapidly in favorable situations. One of my informants was a German bookbinder of great respectability, settled in London, and for many years employed by the Admiralty as a confidential binder of records or journals containing secrets of office, &c. Through this connection he had been recommended to the service of his majesty, whom he used to see continually in the course of his attendance at Buckingham House, where the books were deposited. This bookbinder had originally, in the way of his trade, become well acquainted with the money value of English books; and that knowledge cannot be acquired without some concurrent knowledge of their subject and their kind of merit. Accordingly, he was tolerably well qualified to estimate any man's attainments as a reading man; and from him I received such circumstantial accounts of many conversations he had held with the king, evidently reported with entire good faith and simplicity, that I cannot doubt the fact of his majesty's very general acquaintance with English literature. Not a day passed whenever the king happened to be at Buckingham House, without his coming into the binding-room, and minutely inspecting the progress of the binder and his allies—the gilders, &c. From the outside of the book the transition was natural, and pretty constant, to its value in the scale of bibliography; and in that way my informant had ascertained that the king was well acquainted, not only with Robert of Gloucester, but with all the other early chronicles, &c., published by Hearne, and, in fact, possessed that entire series which rose, at one period, to so enormous a price. From this person I learned, afterwards, that the king prided himself, especially upon his early folios of Shakspeare; that is to say, not merely upon the excellence of the individual copies in a bibliographical sense, as “tall copies,” and having large margins, &c., but chiefly from their value in relation to the most authentic basis for the text of the poet.—*Autobiography of De Quincey.*

CARRIER PIGEONS.—The proprietor of the Ceylon paper, the *Colombo Observer*, in the absence of an electric telegraph, has successfully employed pigeons in conveying intelligence for that journal from Candy, a distance of sixty-five miles in a straight line.

From Tait's Magazine.

## LIGHT AND DARKNESS.\*

It is somewhat amusing to observe the course taken by that guide, philosopher, and friend of all mankind, the newspaper, upon the occurrence of any very heinous crime, or the execution of any extraordinarily atrocious murderer. On one side of the broadsheet we find column after column minutely detailing every particular that can be ascertained respecting the offence and the offender; but when we reverse the sheet we fall foul of a censor who rebukes us in no measured terms for bestowing time and attention upon the labors of his humble colleague, the reporter. Nay, the latter is generally accused of "pandering to a perverted taste;" his readers are convicted, unheard, of "morbid curiosity;" and, from the unapproachable height of a leading article, the pitying sage will sometimes regret that "several respectably-dressed persons, and even females," were perceived among the spectators of an execution.

It is, however, sadly to be feared that all those fine phrases and sentimentalisms are nothing more or less than mere cant—recognized and conventional, perhaps, but still pure and unmitigated cant. People have human feelings, and cannot be preached out of them, be the assurance that they are deficient in a fanciful delicacy, when they indulge them, ever so perseveringly repeated by our daily and weekly monitors. Precisely the same feeling that attracted Athenians to the representation of the "Agamemnon" of Æschylus, and draws crowds, while we are writing, to witness Mr. Phelps' performance of "Macbeth," at Sadler's Wells, but far more powerful and intense in proportion as reality is mightier and more impressive than fiction, irresistibly absorbs our attention when we have notice given us of the commission of a crime of extraordinary atrocity, or of the terrible vengeance that the law takes upon a convicted murderer. In the presence of the most awful events of individual life, conventionalities such as are desecrated by the respectabilities of the newspaper press have in truth no place whatever. The mind of one that listens to the narrative of a heinous crime is lifted from its ordinary sphere, and wrapt in horror and astonishment while it contemplates deeds strange and alien to its own nature. The culprit is regarded with admiration unmingled with esteem, and we are irresistibly attracted to observe the outward figure that envelops a soul grandiose in the courage with which it scorns the restraint of law human and divine, and terrible in the evils which it has wrought upon mankind in the persons of individual sufferers. In such cases the imagination of every one forms the tale into an epic or a tragedy with all the fervor, though without the skill, of the artists whose composition we read or listen to unrebuked, and it is simply ridiculous to upbraid the more impulsive as cruel or sanguinary when they flock to witness the last dreadful scene of a real drama. No sane person would entertain any feeling that could be classed as pleasurable from witnessing the mere extinction of animal life. Public curiosity does not pry into the chamber of death, or revel in the carnage of the slaughter-house. A mighty beast of prey, on the other hand, such as a lion or tiger, or a criminal

whose deeds have a close analogy to those of the natural enemies of mankind, and the sight of whom recalls mingled emotions of fear and pity, and a sense of retributive justice, will always collect a crowd of gazers as long as human beings exist and are influenced by their ordinary human sympathies.

It is not, therefore, without reason, that Mrs. Crowe has selected her themes from the regions of the dark and terrible. Assassinations, murderers agonized by the reappearance of their victims, dead or miraculously alive, the inconceivable twists and turnings of circumstantial evidence, sometimes leading to poetic justice, but too often to the condemnation of the innocent, fill her pages with matter of infinite variety and interest. In all of her tales, however, a moral, and that a useful one, is unobtrusively suggested; and her skill in so doing is hardly less remarkable than the lucid and easy style with which her narrative is illustrated.

France, as might be expected of the country in which *causes célèbres* are indigenous, supplies a fair proportion of subjects to our weird-woman. The "Accusation," the "Tile-burner and his Family," the "Story of Lesurques," the "Priest of St. Quentin," "Antoine de Chaulieu's Wedding-day," the "Prisoners," the "Lycanthropist," and the "Conciergerie," show an indubitably Gallic origin. Italy, Holland, and Germany, contribute their quotas, no less distinctly characterized; but from the United States and Great Britain it would seem that the newspapers have gleaned everything that is reasonably detestable and interesting.

The "Accusation," which we have already mentioned, is a tale of earlier historical date than any other in the volumes before us. Its first important era is the Massacre of St. Bartholomew's-day, on which a Count Joachim de Chateauroux, the military commandant of Rouen, loses his first-born son in the tumultuous onslaught of the bigoted assassins of the Huguenots. A second son, however, is subsequently born to perpetuate the ancient family, and retrieve it from its impoverishment, by forming an alliance with a wealthy heiress. The lady unhappily, though wealthy and liberal, did not possess personal attractions sufficient to enchain the volatile affections of the young count. Her not unfounded jealousy only made matters worse. His home became, in consequence, very distasteful to M. de Chateauroux, and he indulged in frequent and protracted absences. Upon the occasion of his return from one of these, his lady received him with more than her usual ungraciousness; and in the course of a violent altercation threatened him with a vengeance he little thought of. Upon separating for the evening to sleep, according to the usual French fashion, in separate apartments, her anger was expressed in no measured terms in the presence of her attendant; and she was afterwards heard by two of her servants to visit the chamber to which her husband had retired. In the morning he was gone. There were traces of blood in his bedroom and on the balustrades of the staircase; but there was nothing more that might account for the mysterious disappearance of the count. For a while it was, or might be, supposed that he had absented himself from his uncomfortable home as usual, though somewhat more abruptly than he was wont to do; but time wore on, and there were still no tidings of the count. Sinister rumors soon began to be whispered about. The conduct of the countess when he was last seen was remembered, and commented upon with little charity. At last, in the mouths of the husband's

\* Light and Darkness; or, the Mysteries of Life. By Mrs. Catherine Crowe, author of the "Night Side of Nature," "Susan Hopley," &c. London: Henry Colburn.



kinsmen, they assumed a definite shape; and the murder of the count was unequivocally laid to her charge by them. It was in vain for the lady and her relatives to remonstrate. A trial was insisted upon; and the facts we have mentioned, coupled with the suspicious disappearance of two servants, Clarice and Morel, who had slept in adjacent chambers, were sufficient, as laws then were, to warrant the court to condemn the unhappy countess as the murderess of her husband. A day was eventually fixed for her execution; and little doubt prevailed, either among lawyers or laymen, that a great criminal had at last been overtaken by justice.

On the eve, however, of the day appointed, everybody was astonished by the arrival of a courier, bearing a pardon for the unhappy convict, and the still more unexpected intelligence that the Count of Chateauroux was still alive, and would himself appear on the following day to rescue his wife from prison, and conduct her home in triumph. The announcement was fulfilled in due course. The count did appear alive, but looking pale and wasted, and it was said he had been long suffering from ill health—a circumstance which would also go some way to account for his having so long remained ignorant of the danger his wife incurred from his absence. The count and his lady now dwelt together more regularly than they had done heretofore, and mixed in the society of the province with unusual frequency; but notwithstanding the dead-alive was readily enough received by his ordinary acquaintance, his own family, to the astonishment of everybody, persisted in maintaining that an imposture was put upon the world, and that the Count of Chateauroux, who now occupied the ancestral mansion of the race, was not the same as he who had so mysteriously disappeared some years before. Things went on in this way for eighteen months, when the count again departed, and returned no more. This time, however, there were no more rumors of himself or his substitute having been unfairly put out of the way. The countess lived as usual for several years, and, when she died, obtained the last offices of the church without objection from her confessor or from any other quarter.

The domain of Chateauroux was now left without a master, unless M. Francœur, the agent for the deceased countess, could be called so. There was, however, no lack of claimants. The lady, as we have mentioned, was an heiress, and the bulk of the property would, upon the death of herself and her husband, revert to her family. On the other hand, the death of the count was still uncertain, and until that was established, it was both the duty and the interest of the count's relatives to preserve the estate intact for him. The consequences were a protracted and expensive lawsuit between the relatives of the husband and wife, who now changed sides as to the question of the death of the count, the former affirming his existence as stoutly as they had denied it upon the trial of the countess, and the latter doing exactly the reverse. Matters were thus at a dead lock, when M. De la Rive, a near kinsman of the late countess, was at Chateauroux, in earnest conversation with M. Francœur as to the possibility of terminating the lawsuit, when a heavy footstep was heard, and an elderly man entered the apartment. As he advanced towards the gentlemen, they both, with one accord, cast their eyes up towards the picture of old Count Joachim, the father of the last inhabitant of the castle. It seemed as if the picture had stepped out of the frame.

Never was there such a resemblance between a living being and a picture, in face, figure, clothes, and everything. Francœur was most affected by the singular apparition. Though in the company of another, and in broad daylight, he seemed as if he were convinced he saw a being of another world.

Without commenting upon their confusion, more than by observing that age had increased the resemblance he always bore to his father, the stranger addressed the two gentlemen by name, inquired after his wife, the countess, appeared shocked and grieved to hear of her death, and then, to their astonishment, denied that he had ever been aware she had been accused of his death, or that he had returned after the mysterious absence first mentioned, and dwelt with her for eighteen months. M. De la Rive, though unable to account for the strange mystery of the whole affair, made no difficulty of recognizing the count in the aged stranger before him. Two old servants, left in charge of the chateau, and the people of the neighboring town, were equally convinced of his identity; but M. de Francœur gave very significant indication that he was far from being convinced. "He had," he said, "been deceived by an impostor once, as it seemed; he would take care not to be so again."

To the house of M. Francœur, however, the stranger proposed to resort for the night, as there was no accommodation in the chateau, which had been inhabited by a few servants only since the death of the countess; and to this proposal M. Francœur, after some hesitation, assented.

As they were proceeding thither the stranger observed to his host, that he had made several alterations there since he had left the neighborhood, and "In particular," said he, "I remember there used to be a well at the end of yonder field, which seems to have been filled up." M. Francœur seemed to start at the remark, but replied that he had caused it to be done during the infancy of his children, to whom it might have proved dangerous. Nothing further passed at the time, but in the course of the evening M. Francœur privately intimated to his guest that he knew him to be an impostor, and should not suffer him to intrude himself upon the estate of another. He knew, he said, the Count of Chateauroux was dead; but to all inquiries by the stranger as to the means of his acquiring, or being able to substantiate, such knowledge, he refused to give any reply. On the next day, however, the *soi-disant* count repaired to the chateau and took undisputed possession, and, after some time, summoned M. Francœur to render an account of his stewardship. To this the agent made no objection; for though he had all along rather ostentatiously treated M. De la Rive as the real owner, he had been unable to convince that gentleman that the present inmate of Chateauroux was an impostor, and that the real count was dead. In the course of investigation, inquiries had been made of the old priest who had confessed the countess on her death-bed; but now that his penitent was no more, the holy man had no hesitation in avowing that she had told him it was true she had gone to the door of her husband's room on the night of his mysterious disappearance, to endeavor to effect a reconciliation with him, but had been stopped by false pride from entering it and accomplishing that good purpose; that she was perfectly innocent of his death; and unable to account for his voluntary or involuntary departure, whichever it might be; and though the stranger, whose forthcoming had saved her from an ignominious death,

had dwelt in the chateau with her for eighteen months, she was equally unconscious by what agency his opportune arrival had been secured, or whither he had gone. She was, however, certain that he was not her husband, the Count of Chateauroux.

Now, about the time that M. Francœur had been appointed to render in his accounts, he was also engaged in making some extensive alterations in his house; and it so happened that M. de la Rive, to whose son it was proposed Mademoiselle Francœur should be affianced, was cognizant of these changes, and had been present at an interview with the architect who was to superintend them. The latter pointed out that the new well must be filled up to carry out the projected arrangements; and, as they were generally of an important character, it was necessary to obtain the consent of the landlord previously to their being made. With the accounts of M. Francœur, accordingly, a request to that effect was sent to M. Chateauroux; and on the next day he came to view the place and discuss the matter, as a careful landlord would do, and brought with him M. de la Rive and the architect as his companions. In the course of the conversation the subject of closing the old well was mooted; and when it was alleged that the water had been tainted and become unfit for use, the architect was desired to go down and examine it.

It was dry, as often happens when a new and deeper well is dug in the neighborhood of another. "But," said the architect, "have you ever heard of anybody being lost hereabouts?—for I am greatly mistaken if there are not here the remains of clothes and a human body. Send down a basket." His request was immediately complied with; and when a heap of what seemed dirt, mingled with black, decaying bones, together with a watch, encrusted with rust, was drawn to the surface, M. Francœur turned ghastly pale, and seemed to have received a deadly blow. And in truth it was so. For three days more he lingered on a bed of sickness; but before he died he revealed the sad and secret end of the lost Count of Chateauroux.

It had happened that M. Francœur had been suspected by the unhappy nobleman of abusing the confidence reposed in him with respect to the property of the countess, over which he had unlimited control; and, if his suspicions were not very clearly expressed, it was at all events beyond doubt that he was determined to investigate how it was the money required to purchase an estate, greatly desired by the lady, owing to its contiguity to her own possessions, was not forthcoming when the property came into the market, and was snapped up by a competitor with readier resources. The fact was, that the agent had employed the funds of his client in speculations of his own, from which he could not suddenly have withdrawn them without exposing himself to great loss, and the obvious inference that he had been abusing his trust. It was on this subject that the count had sought an interview with him before he repaired to Chateauroux for the last time, and invited him to come thither early in the morning, and then enter into a thorough explanation of the matter. After the count had left him, Francœur was at his wits' end. At night he found it impossible to sleep; and before day-break turned out into the open air, and paced up and down before his house, moodily imagining excuses and evasions, by which he might escape from the dreaded investigation.

Now it had happened that the count, who had returned principally with the object of protecting the property of his lady from dilapidation, (for though he had long ceased to love her, yet, as an honorable man, he still conceived it to be his duty to watch over her interests,) had been so shocked and outraged by the reception he met with from her, that he had, in a fit of passion, determined to quit a place she made so distasteful to him, with all speed. He accordingly rose about the same time as Francœur, and, to the astonishment of the latter, stood before him unexpectedly in the gray of the morning, and told him that he should absent himself forthwith from home. To do this he required a sum he mentioned; and the request was not an unusual one, for the count always drew from the agent the funds he required for his ordinary disbursements. Some conversation as to the exact balance that ought to be in M. Francœur's hands was closed by an observation that the count's hand was bleeding as from a cut, which was explained by the latter to have been caused by his having broken some glass cases in his bedroom, when he rose before daybreak. M. Francœur, as in courtesy bound, begged the count to wait while he went into the house to obtain some rags to stanch the wound. After having found some, he was about to return, when it occurred to him that if he also took with him the money required by his guest, that troublesome inquirer might perhaps depart on his hasty journey without further question as to the accounts. In pursuance of this idea, he went to his study and took out the money; but before he could rejoin the count, a large and powerful dog of the St. Bernard breed escaped from the study, in which he was shut as a guard to the house by night, and more especially to that part of it that held the strong box. M. de Chateauroux at this moment had drawn some water from the well, and was bending over the bucket to wash his wounded hand. The dog bounded towards him, and, before he was aware of its presence, it had, in its gambols, sprung up against his shoulders, made him lose his balance, and precipitated him into the well. For a minute or two the agent heard the count's voice calling him by name, but Francœur remained immovable. The voice became fainter and fainter, and soon ceased altogether. The agent might not have been able to save him, but, alas! he did not make the attempt; he felt afterwards that he had murdered him. Still, it might have been a truer and better policy to have divulged the death, and represented it, as indeed it mainly was, to have been the result of accident. But no; Francœur knew that the investigation of his accounts might accidentally be mooted in the inquiry, and that, not merely his character and property, but even his life, might be imperilled by suspicions attaching to the strange circumstances under which M. de Chateauroux came to his end. It was with this fatal certainty in his sole knowledge that the agent heard of the impending danger of the unhappy widow; but his lips were sealed. To divulge what he knew was inevitable ruin. That the so-called M. de Chateauroux, who appeared when the countess was pardoned, could be nothing but an impostor, he made no scruple of affirming to that person in private, though, for the sake of his lady, he pretended to acquiesce in the general recognition of the identity. But how the substitute was provided, or whether he went, he knew no more than the countess; and equally ignorant was he of the

elderly stranger who had taken possession of Chateauroux without dispute, and contributed so largely to the final discovery in the well.

It was a little before the unhappy agent had made his confession that this point was also cleared up by the stranger in conversation with M. de la Rive. His life had been strange and eventful. At an early age he remembered a town, which, in later years, he recognized to be Rouen, and a gentleman whom he called father, and heard addressed as commandant. The next recollection of his childhood was, that he was torn from his mother by armed men in the course of a furious tumult; that, young as he was, he received a sword-cut from one soldier, but was saved by the pity of another. The latter afterwards adopted him, and settled him with a hair-dresser in Paris, from whom he learnt his trade. While thus engaged, he happened to attend upon M. Adolphe de la Rive, the brother, now dead, of Eugene de la Rive, with whom he was conferring. At first, Adolphe mistook him for M. de Chateauroux; and when his mistake was discovered, persuaded him to personate the unhappy nobleman for the sake of saving the falsely-accused widow from the scaffold. After he had played the part of a substitute, as we have seen, he entered a merchant's house, and rapidly accumulated a fortune. An accidental meeting with Clarice, who mistook him for her old master, and the information afforded by her, that it was owing to the hints of M. Francœur that she and Morel had absconded, directed his suspicions against the agent more strongly than his own observations had already done. The result we have already seen. It was beyond a doubt the stranger was the elder brother supposed to have been killed in childhood during the massacre of St. Bartholomew. He preferred, however, to remain in the position of a wealthy bourgeois to claiming the title and estate which had devolved upon him. The latter he surrendered to M. de la Rive without hesitation or regret. By the marriage of his daughter, however, with the son of M. de la Rive, the property which he relinquished for himself was ultimately enjoyed by his grandchildren.

In this tale, the longest and most elaborate in the three volumes, we are afraid that historic truth has somewhat suffered, as upon other occasions, for the sake of "making things pleasant." A subsequent story, that of "Joseph Lesurques," bears a more deeply marked stamp of reality about it, and is, we are afraid, merely one instance among thousands of a class of grievous accidents which occur from time to time in all ages and in all countries.

Lesurques was a country gentleman, in easy circumstances, who had resorted to Paris in the year 1796 for the purpose of obtaining those educational advantages for his children which a metropolis alone can supply. But a little time had elapsed since the arrival of the family in their new domicile when the following incident took place. But we must give the tale in Mrs. Crowe's words:—

At an early hour in the morning of the 8th Floréal, (a month which consisted, in the then French calendar, of half April and half May,) the guard at the Barrière de Charenton observed four horsemen pass through the gate, and take the road to Melun. It was not difficult to perceive that the animals they rode, though handsome and in good condition, were on hire; whilst, from the lively jests which seemed to be circulating amongst the cavaliers, they were supposed to be leaving the city for a day's diversion in

the country. A closer observer might perhaps have discovered some traces of anxiety beneath their smiles and laughter; and a slight metallic clang that was heard now and then, when their impatient horses reared or plunged, would have suggested the suspicion that they carried arms beneath their long riding-coats.

The little party reached Mongeron, a village on the road to Melun, between twelve and one o'clock; one of them having galloped forward for the purpose of ordering a luncheon to be prepared at the *Hôtel de la Poste*. They ate with excellent appetite, and after their repast two of them called for pipes, and smoked very deliberately till towards three o'clock, when, having taken their coffee at a neighboring casino, they mounted their horses again and pursued their journey. The road they selected was that which leads through the forest of Senart, and as it was protected from the sun on each side by rows of elm-trees in luxuriant foliage, they allowed the reins to drop on their horses' necks, and advanced at a foot's pace, as if to enjoy the pleasant shade.

In this manner they reached Lieursaint, a beautiful village, surrounded at that period by a forest, and famous in history as the scene of Henry IV's adventure with the miller; and here they made a somewhat unusual stay; one of their horses had lost a shoe, and the chain which attached the spur of one of the riders to his boot was broken. This last, on entering the village, stopped at the house of a woman called Chatelain, a *limonadière*, of whom he requested a cup of coffee, and asked also for some strong thread to repair his chain withal, which she gave him; but observing that he was not very expert at the job, she summoned her maid to his assistance, during which operation they had both, of course, ample leisure to notice his person and features. In the mean time, the others had ridden through the village as far as an inn kept by a man of the name of Champeaux, where they alighted and called for wine; whilst the horse that had lost its shoe was sent to the blacksmith's. They then all repaired to the widow Chatelain's, where they played several games at billiards; after which, having once more refreshed themselves with a draught of wine at the inn, they mounted their horses and started in the direction of Melun, about half-past eight in the evening.

When Champeaux returned into the room they had just quitted, he found a sabre in its sheath, that one of the party had forgotten. This he immediately sent after them, but they were already too far on their way to be overtaken by the messenger. In about an hour afterwards, however, the owner returned in great haste to reclaim it; it was he whose spur had been repaired at the *limonadière's*, and, having hastily tossed off a glass of brandy, and buckled on his sword, he put his horse to its speed and rode off as rapidly as he had come.

Precisely at the same moment, the courier bearing the mail from Paris to Lyons drove into the village of Lieursaint, for the purpose of changing horses. It was exactly half-past nine o'clock, and already quite dark. He was presently away again, with fresh horses and postilion, galloping at full speed towards the forest of Senart. The carriage which in those days conveyed the French mails is described as an elegant, light vehicle, with a strong box behind for the letters, and room within for two persons, one place being occupied by the courier in charge of the bags, and the other being let to any traveller who was willing to pay for it. On the present occasion this place was occupied by a gentleman, apparently about thirty years of age, who had booked himself under the name of "Laborde, silk mercer at Lyons." At about two hours' journey from Lieursaint, the road sinks into a hollow, out of which it rises on the other side by a very steep ascent, and up this the postilion was slowly walking his horses, when there was a rustle in the thicket, followed by the sudden appearance of four

men, two of whom seized the horses' heads, whilst the other two attacked the postilion, and in a moment separated his head from his body; at the same instant the courier was stabbed to the heart by his fellow-traveller, both murders being performed so dexterously that not a cry escaped from the victims. The coffin was then forced open, and the assassins possessed themselves of all the money the courier carried with him, amounting to a sum of 75,000 francs, in bills, bank-notes, and silver. They then returned immediately to Paris, the fifth conspirator being mounted on one of the carriage-horses, and betwixt the hours of four and five in the morning they reentered the city by the Barrière de Rambouillet.

A bolder and more reckless enterprise than this has seldom been undertaken; and even at that period, when deeds of blood and violence were too common in France, it awakened terror and amazement throughout the country. The assassins were scarcely in Paris before intelligence of what had occurred had reached the authorities, and the most rigorous measures been instituted for their discovery.

The first indication met with was the post-horse, which the rider had turned loose on the Boulevards, and which was found wandering about the Place Royale. It was also ascertained that four other horses, bathed in sweat, evidently much over-ridden, had been brought into the yard of a stable-keeper named Mairon, at five o'clock in the morning. Mairon admitted at once that they had been hired on the previous day by two persons known to him; one as Monsieur Bernard, the other as Couriol. The former was instantly arrested, but the latter, with the rest of the band, had effected his escape; nevertheless, as the whole country was on the alert, and the descriptions given by the innkeepers where the four horsemen had baited were extremely precise, there seemed little chance of their ultimate evasion.

With respect to the fifth, the people at the post-office, where he had taken his place, described his person with equal accuracy. In the mean time, Couriol had taken refuge in the house of a friend, named Bruer, who resided at Chateau Thierry, whither he was traced and arrested. In the same house was found Guesno, (a friend of Lesurques,) who appears to have gone there on business of his own. They however seized him and Bruer also, together with their papers; but the two latter, having clearly proved their *alibi*, were dismissed; whereupon Guesno demanded back his papers.

"Come to-morrow morning," said the magistrate. "and they shall be delivered to you."

Now, Guesno was extremely anxious about his papers, the want of which was retarding some business he had in hand, so on the ensuing morning he started betimes for the police-office, and, as the fates would have it, who should he meet on his way but his old friend Lesurques! Naturally enough, they fell to discussing this strange affair, which was then the theme of every tongue, and, engaged in conversation, they proceeded arm-in-arm till they reached the office, where, partly from curiosity and partly for the sake of his friend's company, Lesurques consented to wait for Guesno till his business was concluded. They were, however, so early that Daubenton, the magistrate, had not yet arrived; so the two friends seated themselves in the ante-room, through which they expected him to pass, where several other persons were also waiting, and amongst them the witnesses who had been brought in from Lieursaint and Mongeron, to give evidence against Couriol and the others.

Daubenton, in the mean while, having entered his office by another door, was busily engaged in looking over the informations relative to this business, when one of his assistants hastily entered to inform him that some women in the ante-room declared that two of the murderers were calmly sitting amongst them. The magistrate could not believe it, and he sent for the women, separately, to question them; but in answer

to his inquiries, they both positively reiterated their assertions. One was the maid Santon, who had served the travellers whilst dining at the inn at Mongeron; the other was Grossetete, servant to Madame Chatelain, the *limonadière*, who had mended the spur, given them coffee, and seen them playing at billiards; they were confident that they were not mistaken.

Still the magistrate, who appears to have been most worthy of his office, could not bring himself to believe that the guilty parties would so recklessly run into the lion's jaws; and he urged the women to consider well the consequences of what they were saying—the lives of two of their fellow-creatures hung upon their breath; but their conviction was not to be shaken. He then bade them sit down, whilst he called in the gentlemen separately, and conversed with them both on indifferent matters, and also on the late assassination. When he dismissed them, promising Guesno to send him his papers, he again turned to the women, whom he hoped to find ready to retract their assertions; on the contrary, they were more than ever confident of their correctness. Nothing therefore remained for the magistrate but to order the immediate arrest of Guesno and Lesurques, although himself, especially after the late conversation, was intimately persuaded of their entire innocence. What a dreadful situation for him!

The two prisoners were immediately confronted with the witnesses, who one and all swore to their persons, agreeing, without exception, that Lesurques was the man whose spur-chain had been broken, and who had afterwards forgotten his sword at Lieursaint. \* \* \*

Lesurques, Guesno, Couriol, Bernard, Richard, and Bruer, were all brought to trial, the three first as principals, and the latter as abettors or receivers, on which occasion the witnesses swore as positively as before to the persons of Lesurques and Guesno. The last, however, proved a most satisfactory *alibi*, and Bruer succeeded in entirely establishing his innocence. Lesurques was less fortunate, although his *alibi* was also sworn to by fifteen respectable witnesses, some of whom had lunched with him, others dined with him, at such hours as rendered it physically impossible he could have been at Mongeron or Lieursaint on the day in question. The porter, and workmen employed in his house, also gave testimony in his favor.

It was just as the jury were about to yield to the weight of this evidence that the well-meant zeal of a townsman of Lesurques proved fatal to him. This man was a jeweller called Legrand, who had sworn to having transacted some business of importance with the accused on the day mentioned in the indictment, which fact was corroborated by another jeweller named Aldenoff. Elated at the weight of testimony brought in favor of his friend, Legrand most unfortunately proffered his books, where, he said, a certain entry would be found establishing the fact of Lesurques' presence in Paris on the 8th Floréal. The books were accordingly sent for and examined: but an evident erasure and alteration of a 9 into an 8 overthrew, not only the evidence of the jewellers, who were very respectable men, but seems to have cast a doubt on that of all the other witnesses. The president of the court pressed for an explanation, which Legrand not being able to give, an order was issued for his arrest, whereupon the poor man, entirely losing his presence of mind, confessed that he did not know to a certainty on what day he had seen Lesurques, but that, being entirely assured of his innocence, he had made that alteration in his book with the hope of establishing what he was satisfied was true. From that moment the tide of opinion changed; the evidence of the other witnesses was looked upon as the result of a conspiracy, and a certain degree of anger and resentment took possession of the minds both of judge, jury, and audience. Lesurques alone was calm; the more things went against him, the more unmoved he appeared.

At this critical juncture, whilst the jury had re-



tired to consider the verdict, a woman, in a state of excitement bordering on insanity, rushed into the court, and demanded to be heard. Being brought before the president, she declared, with the utmost vehemence, that Lesurques was entirely innocent of the crime imputed to him. "The witnesses are deceived," said she, "by the extraordinary resemblance which exists between him and the real criminal, for whom they mistake him. I know him well; he has fled, and his name is Dubosque."

This woman, Madelaine Brebon, was Couriol's mistress; and in making this avowal to which her conscience urged her, she admitted the guilt of her lover. Yet was she not believed; nor was her evidence investigated; the ill effects of Legrand's confession were yet too recent. Couriol, Lesurques, Bernard, and Richard, were found guilty, the three first being condemned to death, the last to the galleys. Guesno and Bruer were acquitted.

As soon as the sentence was pronounced, Lesurques rose from his seat, and, with entire composure, declared his innocence, adding, that "if a murder on the highway were a fearful crime, it would be well for his judges to remember that a judicial murder was no less so."

Then Couriol arose. "I am guilty," said he; "I confess it; but Lesurques is innocent, and Bernard had no part in the murder."

Four times he reiterated this assertion, and from his prison he wrote a letter, full of sorrow and repentance, to the same purpose: "Lesurques knew nothing of the affair; the names of the other parties concerned were Vidal, Rossi, Durochat, and Dubosque; it is the last for whom Lesurques is mistaken."

Madelaine Brebon also made another effort to convince the authorities of their mistake; but, strange to say, neither her assurances, nor those of Couriol, who could have no interest but a conscientious one, in denying for Lesurques what he avowed for himself, were sufficient to save the life of this unfortunate victim. It is true, a petition was sent in to the Directory, and the Directory referred the matter to the *corps législatif*. All they asked for was a postponement of the execution. "Must Lesurques die," said they, "because he has the misfortune to resemble a criminal?"

The answer of the legislative body was, "that the process had been strictly legal; that a single case could not justify the violation of a well-considered statute; and that to set aside the verdict of a jury for the reasons advanced would be equivalent to arraigning the wisdom and justice of the law as established." Since the right of pardon no longer existed, there thus remained neither hope nor help for Lesurques.

On the day of his execution, he wrote the following letter to his wife, which, from the stoicism it exhibited, was very much admired by the Republic—at that period, in the midst of their disorders, affecting a great admiration of classical heroism:—

"My dearest Love—No man can elude his destiny—it is mine to die on a scaffold, the victim of an error. I shall meet my fate as becomes me. I send you some of my hair; when my children are old enough, you will divide it amongst them. It is the only inheritance I have now to leave them."

Unhappily, it was so, his whole property being confiscated to the state.

After sentence was pronounced on him, Lesurques also caused the following letter to be inserted in the public journals, addressed to the real criminal:—

"Be thou, in whose place I am to die, content with the sacrifice of my life. The day will probably yet come that you will find yourself in the hands of justice—then remember me! Think of my children, and of their broken-hearted mother, covered with disgrace. Restore them their good name; repair their dreadful

misfortune, which has wholly originated in the fatal resemblance betwixt you and me."

The executions took place on the 10th of May, 1797. As they went through the streets, Couriol stood up in the cart, and cried aloud to the people, "I am guilty, but Lesurques is innocent!" The latter died forgiving all men, and calling God to witness the injustice of his sentence.

Amongst those who were perfectly satisfied of Lesurques' innocence was Daubenton, the justice of the peace; and, as he had unfortunately been a principal agent in the catastrophe, he felt that nothing could appease his remorse but the reintegration of the victim's fame—a tardy, but, as regarded his family, most important reparation; and as this could only be effected by the arrest of the other three criminals named by Couriol, he resolved never to relax his exertions till he laid his hands upon them.

Two years had elapsed since the death of Lesurques, before Daubenton discovered the slightest indications of what he sought; but, at the end of that time, he found in the police reports, which day and night were brought to him, the name of Durochat. This was the man who, under the name of Laborde, had travelled with the courier, and he was now in the prison of St. Pelagie for a robbery. There was no difficulty in identifying him; and, accompanied by Daubenton, four gendarmes, and a constable, he was conveyed to Versailles to be examined. On the road he expressed a wish to breakfast, alleging that he had had nothing to eat since his arrest on the previous day. They accordingly stopped at a small public-house, and there Durochat requested a private interview with the magistrate. The constable pointed out the danger of trusting himself alone with such a confirmed villain; but Daubenton, bent on obtaining the justification of Lesurques, ordered breakfast to be served for himself and the prisoner in a private room. They seated themselves opposite each other, and Daubenton took up a knife to open an egg; it was the only one on the table, the constable having cautioned the maid who waited not to put down a second.

"You are afraid of me," said Durochat to the magistrate, looking hard at him; "you arm yourself already."

"Take the knife," said Daubenton, handing it to him. "Cut yourself a slice of bread, and tell me what you know of the affair of the Lyons' courier."

He had taken the right way. Durochat savagely clutched the knife; but in a moment more he stood up, and laid it on the table. "You are a brave man, citizen!" said he, "and I am a lost one. You shall know all."

Whereupon he made a full confession, confirming in every particular the account given by Couriol. He had himself fled on the first alarm, and the name of Lesurques he had never heard till after his execution.

It was Dubosque that had repaired his spur at Mongeron—Dubosque that had forgotten his sword at Lieursaint.

Some time elapsed before the other three were taken, but finally the exertions of Daubenton were crowned with success. Vidal, Dubosque, and Rossi, were arrested, and paid the penalty of their crimes. The confessions of Durochat and Rossi coincided entirely with that of Couriol; Vidal and Dubosque denied to the last, though no doubt remained of their guilt. A light wig, such as he had worn on the fatal day, being placed on the head of Dubosque, the resemblance betwixt him and Lesurques became so remarkable, as perfectly to account for the unfortunate error of the witnesses, who had also been led by a certain similarity of feature to mistake Guesno for Vidal.

The innocence of Joseph Lesurques was thus made manifest to all the world; nobody could doubt it; and his family seemed naturally entitled to the restoration

of their property, and such a full and perfect vindication of his fame as a revision of his sentence alone could afford. And for these, we will not say favors, but sacred rights, they have never ceased to supplicate, backed by the support and assistance of several eminent jurists; whilst the good magistrate, Daubenton, devoted not only the latter years of his life, but a considerable part of his fortune, to the promotion of their suit. But, alas! without success: the verdict of a French jury cannot be revised!

In 1842 died the widow of Lesurques, leaving a son and daughter, from whom, on her death-bed, she required a promise that they would never relax in those duties to their father's memory to which she had devoted her life. Her eldest son had fallen, some years before, in the service of his country. During the reigns of Louis XVIII. and Charles X., a part of the property of this unfortunate family was restored to them—not as a *restitution*, however, but as a *favor*!

Of the remaining tales, the "Priest of St. Quentin," "Chaulieu's Wedding-day," and the "Bride's Journey," are perhaps those of the deepest interest. A long chapter, in which half-a-dozen lady poisoners, in France and Germany, are noticed together, is certainly the most horrible in the whole work. The cases, moreover, are all historical, and some of them of no ancient date.

Though, however, the skill of a tried artist like Mrs. Crowe makes our very blood run cold while we peruse these shocking narratives, we doubt whether even her skill would not sink under an attempt to describe faithfully what is going on around us daily. At no period, and in no country, has systematic poisoning spread to such a frightful extent as among ourselves at present—no, not even in Paris in the time of La Voisin and Madame de Brinvilliers. Hardly a week elapses that scores of helpless children are not deliberately sacrificed by their parents for the sake of the small sums obtainable from burial-clubs, and the fabled crimes of Medea and Clytemnestra find terribly frequent parallels in trials at assize towns. The public apathy with respect to these offences—an apathy existing solely because the crime and the danger are confined to the poorer classes of the population—does but little credit to an age that arrogates to itself superior civilization and enlightenment.

From Sharpe's Magazine.

#### A FEW WORDS ABOUT WAR AND THE PEACE CONGRESS.

Our bruised arms hung up for monuments;  
Our stern alarms changed to merry meetings.

RICHARD III.

But in these serious works, designed  
To mend the morals of mankind,  
We must forever be disgraced  
With all the finer sons of taste;  
If once, the shadow to pursue,  
We let the substance out of view.

CHURCHILL.

A French gentleman, in the reign of Louis XIV., was comparing the French and English writers, with all the boastfulness of national prepossession. "Sir," replied an Englishman, better versed in the principles of freedom than the canons of criticism, "there are but two subjects worthy the human intellect, Politics and Religion—our state here and our state hereafter; and on neither of these *dare* you write." Long may the envied privilege be preserved to my countrymen of writing and talking concerning both! Nevertheless, it behoves us all to consider, that to write or talk concerning any subject, without having previously

taken the pains to understand it, is a breach of duty which we owe to ourselves, though it may be no offence against the laws of the land. The privilege of talking and even publishing nonsense is necessary in a free state; but the more sparingly we make use of it, the better.—COLERIDGE, *The Friend*.

It is scarcely necessary to remind the reader that "SHARPE'S MAGAZINE" steers clear of the whirlpool of party politics, while it endeavors to keep closely in view the great principles of social and political science, as they are exemplified in the present condition, and are likely to affect the progress of the age. In like manner, eschewing the *odium theologicum*, it essays to spread abroad those great religious truths which are essential to the working out of salvation in the present, as in every Christian age. Bearing these facts in mind, I venture to offer to the readers of this Magazine, a few thoughts concerning the late demonstrations of the Peace Party, in the hope that they may suggest some new phases of the subject to those who have already thought much about it; that it may urge to more thought those who have hitherto thought little; or, that it may induce some to begin to think who have not yet thought at all, about it.

A man need not frown very hard or use violent gesticulation in order to convince us that he is earnest. It is possible to speak of important things without much solemnity of manner, and it is, sometimes, the best as well as the pleasantest method of treating them; therefore, my few remarks will be delivered with little pretension, as they are by no means elaborate. In the limited space of a Magazine article, it would not be wise to attempt anything like the grave forms of argumentation, the strict and careful investigation which a regular treatise would demand. It is my business, on the present occasion, to *indicate* rather than to *prove* truths, to suggest rather than to inform. If any one find fault with what is said, on account of its informal logic, or its want of profundity, let me gently remind such an one that he is quarrelling with an elder-bush for not being an oak-tree.

During the late thirty years' peace the world heard nothing of a Peace Movement—there was no energetic party bestirring itself to prevent war, and to confirm the habit of keeping the peace between two nations by endeavoring to prolong the thirty years *ad infinitum*. But no sooner does war break out in twenty countries at once—war deadly and desperate, *pro aris et focis*, on one side, for the retention of ill-acquired or ill-used power on the other—than up springs a party that denounces war as the very worst thing under the sun. Loudly they proclaim the blessings of peace; as to war, they have nothing to say for that, but that it is unmixed, unmitigated evil. Some of their vivid descriptions of the horrors of war would lead one to believe that men were very devils incarnate. But who does not remember this fair and noble picture?

A knight there was, and that a worthy man,  
That from the time that he first began  
To ride on, he loved chivalry,  
Truth and honor, freedom and courtesy.  
Full worthy was he in his lord's war  
And thereto had he ridden no man far,\*  
As well in Christendom as in Heathenese  
And ever honored for his worthiness.

\* Farther.  
† Praise.

\* Farther.

† Praise.

And of his port as meek as is a maid.  
He never yet no villany ne said  
In all his life unto no manner wight:  
*He was a very perfect gentle knight.*

It is difficult to believe that any system of things which produced such men as this knight was all evil;—and it must be remembered that he is, like all the rest of the company assembled at the Tabard Inn, a specimen of a class, not a *lusus nature* whom the author was fated to see but once. Such as this knight, were very many of the men who fought at Cressy and Poitiers; the flower of chivalry; who knew no better than to serve God and their king with the sword; who esteemed all professions but that of arms unworthy of a brave man and a gentleman. Such were Gaston de Foix, Du Guesclin, the Chevalier Bayard, and a hundred other heroes. It is difficult not to believe that there must have been much good in those long wars, which formed such men.

My thoughts went on thus—Now that Lombardy and Venice, Sicily, Rome, Hungary and Austria are attempting to get back their national rights in the only way in which it is possible for them to regain them, and thereby to establish a *real* peace instead of its frightful mockery, surely *now* is not the time to preach the doctrine of non-resistance. War is undoubtedly a great evil; but it is not so great an evil as dishonor and forced submission to an authority which good and wise men believe to come from any but a heavenly or a righteous source. "Oh! but," say the International Peace party, "the oppressed nation may get its rights without going to war. We will institute an arbitration." Possession is, at present, nine tenths of the law, even of arbitration. What sort of arbitration would the lion submit to, that had the antelope beneath his claws? Yes! it seemed to me very inconsistent to cry out, "Peace! peace!" when, constituted as humanity is now, there could be no peace, which was not more cruel and demoralizing than a patriotic war. Why did not these peace-lovers assemble three years ago, and try to prevent war by showing the true state of political matters, at that time, to the King of the French, to the Pope, to Charles Albert, the emperor, the King of Prussia and the small fry of German royalty, who, to use Mr. Fudge's forcible language, so soon after

Stood prostrate at the people's feet?

Why did they not? Simply because they did not *know* the height and depth, the length and breadth, of the political evil, although they, like other observers of the times, saw that it was growing past control. This could only be known by a warlike outburst, and by the rapid spread of the revolutionary fire; just as the best physician cannot foresee how far an epidemic will spread, or how long it will last, although he may detect its advent in the air; just as a meteorologist can foretell a storm, but cannot foretell what amount of damage it will do, nor how terrible will be its rage. If they could not prevent these revolutionary wars by a peace movement, why do they urge their doctrines *now*, when the weakest party needs warlike help to maintain a cause which it believes, before God, to be just and holy? They are humane people, I have no doubt; but they are, like other men, a bundle of inconsistencies. What is the use of preaching peace in the midst of a battle? Why talk to a man in a passion about the beauty of a calm temper?

Thus I thought when first the agitations of the

peace party were being talked of—at the time when all Italy was in a blaze, and Hungary was rousing herself to fight for independence. The names of Mazzini and Kossuth resounded through their native countries in tones of such affectionate reverence and enthusiastic admiration, that even those, here, who knew nothing of them felt convinced that the men were not swayed by selfishness or the low ambition of demagogues. They fought for principles, and they endeavored to elevate their followers to an enlightened understanding of these principles. They had enough to contend with, no doubt, in the follies and vices, the weakness and the incapacity, of the people they had to deal with. Of each of these patriots may probably be said what was said of Burke—"In his public character he found himself, as it were, in a Noah's ark, with a very few men and a great many beasts." It was to humanize brutish men, to give true and lasting peace to their country, that they and those who thought with them went to war with despotism. It was not that they loved war better than peace; it was that they loved the souls of their countrymen better than their bodies, or than any earthly good; for souls are killed under oppressive, cruel, and ignorant governments, which will not allow them to exercise their faculties. What other way had they of asserting their right to think, and feel, and act as men? War is, indeed, a bad thing; but if a nation have vitality enough within it to feel strongly the dishonor of slavery, let it use that vitality to make itself free; and without being reproached as an enemy to peace. Why—it is to obtain this same beloved peace that it goes to war at all—peace in conjunction with honor and liberty. Peace without honor and liberty is no blessing, but a soporific curse; a cowardly saving of the flesh while it degrades and crushes out the spirit of a man.

Let us consider, now, what strong principles and feelings actuate these leaders of the peace movement, whose benevolent agitations have continued for the last two years with ever-increasing fame. They have a mighty reform at heart; a reform which none but men of active and benevolent natures would attempt to effect, though poets and speculative dreamers might imagine it, and see the desirability of it; and even hope that the days would come when all races of men would be "lapped in universal law"—and instead of wars and rumors of wars, we should see the brotherhood of nations, "the federation of the world." Now, what the poets dream of, the peace party bestir themselves to effect. They say:—War is a shameful and degrading thing—a thing not to be tolerated in a civilized state of society; and we will set ourselves to work to abolish it.

True, to a certain extent, war is an evil; but, by your leave, good peace advocate, I would remind you that half truths are sometimes pernicious falsehoods; the more pernicious, for the portion of beautiful truth they contain, which so fascinates young, and inexperienced, and weak minds, that it prevents them from detecting the falseness that accompanies it. Why is war so bad a thing? Because it takes away human life—rouses and keeps alive a spirit of hatred and vindictiveness; because it ruins commerce and the arts—stops social improvement and destroys property.

First.—It takes away human life. The increased value of human life is undoubtedly one of the proofs that a nation is becoming more civilized. Human life is justly esteemed sacred; but it does

not follow that in no case should it be sacrificed. Death is by no means the greatest evil that one man can inflict upon another. Why is our life valuable! Not that we may eat, and drink, and sleep, and live in fine houses, and wear fine clothes, merely. That is a life worthy only of an intelligent brute. Our life is, or ought to be, valuable to us because we use it in striving to become nobler and nobler, better and better—in striving to make ourselves fitted for a higher life hereafter. If we find ourselves shut out from knowledge and the means of doing good, from love, and growth, and work, and "all that makes it life to live," does it not show that we are letting go the substance to grasp the shadow, if we refuse to put our bodily existence in peril, in order to gain an atmosphere in which our spirits can breathe freely and wholesomely? "Is not the life (*i. e.*, the life of the soul) more than meat, and the body than raiment?" Death—the death of the body—is an awful thing; but do not let us exaggerate its terrors. It is not so awful a thing as that death of the soul, which makes men insensible or indifferent to wrong and suffering, vice and cruelty, and allows them to look on while the grossest injustice and oppression are practised upon their neighbors and friends. It is better to be dead than to be living a life of baseness and dishonor, of weakness and wickedness; at least, it is better to risk the death of the body for the sake of preserving the life of the soul, and leave the result in God's hands. It is better to go to war for a high and holy cause, *if there be no other way of maintaining it*. Truth and holiness are not to be sacrificed for any good things of the earth. In these days there is no fear of a too great general depreciation of human life; therefore, I do not hesitate to express my opinion that it is quite possible to regard it too highly. In effect, all good men show, by their feelings and instincts, that they recognize this truth, although they may allow their understandings to mislead them on the subject. Who does not glow with admiration at the sight, or at the mere narration of an act of bravery, by which a man perils his life for a fellow-creature or for a dumb animal, or even for something valuable to one he loves! Read the account of the daring, the self-forgetfulness of firemen. All men cry out, "Heroic!" "noble!" "glorious!" Yet these heroic men peril their own lives, and encourage others to do the same. They do not think about their lives—their bodily lives; they act virtuously, nobly, generously—that is the *living* they think about and care for. Virtue is more to be desired than length of days; and no good and wise man will sacrifice the former for the latter, or counsel his friends to do so.

Secondly.—War rouses bad passions, hatred and revenge, &c. This cannot be denied; but I doubt whether it rouses them to a greater extent than many of the controversies and divisions among men, in a so-called peaceable community. I believe there is as much, ay, *more*, malignity, and envy, and cruel hatred going on among rival individuals and among commercial, social, and political parties, than is ever called out by open war on the battlefield. And no one, at all conversant with history, biography, and social philosophy, can doubt, for one moment, that war, with all its horrors, calls out a hundred high and noble qualities, in ordinary persons, that would otherwise have lain dormant. It makes the best qualities in the best men flash out clearly, and shows that humanity, with all its errors and weakness, is yet but a little lower than the

angels—and this, in a much more significant way than the ordinary events of a peaceful state can do; constituted as man is now, or rather, *half-developed* as man is now.

It is in no spirit of perversity or contradictoriness that I am inclined to look upon those consequences of war as the least pernicious which the generality of the peace advocates place first in the list of its unmitigated evils. That it takes away human life, and that it rouses strong passions, I consider evils more than mitigated—they seem to me to be counterbalanced by the high principles and self-sacrificing virtues called into vigorous action by war. I will not pause to show in all its bearings the falsehood of the oft-quoted line,

One murder makes a villain, millions a hero!

It is the *motive*, the principle of action, which creates the wide difference between the murder of O'Connor by the Mannings, and the victory of Miltiades and the Athenians at Marathon. To class the two together as acts of the same kind, is the error of a man whose reason is not sound.

But although it does not seem to me that war is unjustifiable, or even one of the *greatest* earthly evils, on the two accounts already glanced at, I still consider it as such, for the other reasons specified above—*viz.*, "because it ruins commerce and the arts, stops social intercourse and improvement, and destroys property;" in a word, because it undoes in a few years the slow growth of centuries, and flings nations back into barbarism and poverty. There is its great evil, as it seems to me. The march of an army through a conquered country supposing it to be a highly civilized one, is a besom of destruction, whose havoc, moral and material, it would take at least a century to recover. Say, for instance, (if it be not high treason against British valor to suppose such a thing possible,)—say that a French army, under a second Napoleon, were to march from Brighton to Carlisle conquering all before it. What effect would that have upon us, and our children, and our children's children—supposing that from Carlisle the invaders were driven out boldly, once and forever, into the Irish Sea, and England were left to recover her losses as best she could! Let the reader ponder on the evils of such an event; and I think he will perceive that the sacrifice of human life, and the high passionate feeling aroused among us, would not be the greatest of these, by any means.

Yes; war is an immense evil, when, instead of being a powerful agent in civilizing the world, (as for many ages it was,) it becomes an agent in undoing the blessed work of civilization, as it is like to become now. Success, then, to the attempts of the peace party to instil a wholesome antipathy to war into the hearts of all nations. Whether we are as yet sufficiently advanced in civilization—the bulk of mankind, I mean—to profit by their doctrine, remains to be proved. For my own part, I fear we are not; but no one would more gladly be convicted of error in this particular. At all events, no harm can come of preaching peace, at this or at any time, providing it be done in peace and truth. I was wrong in thinking the peace party were mere inconsistent men. There is a consistency in their actions and words which may be found in those of all parties banded for an *unselfish* purpose, if we consider them *en grand*—and to take the actions of any party into consideration, piecemeal, is unfair. They agitate for peace, show up the advantages of peace, just when they feel its



importance most, i. e., when the precious things of peace have been perilled by wars—even wars of patriotism and independence.

"Let us try to make men settle their difference by arbitration. We will show them that it is for their interest to do so," say they. There is no harm in trying; but is it easier to move a whole nation by considerations of enlightened self-interest and right reason, than it is to move individuals by such considerations? We know how lamentably philosophers fail who set up theories of human action upon the notion that man acts according to what he believes to be his interest. Nothing was ever more absurd than that notion.

The late meeting of the peace party at Frankfurt is interesting in many ways. That they have done much as yet towards the abolition of war one cannot believe. Still they have done a little. It is by increased knowledge, and higher moral and intellectual culture among the people, that national antipathies, as well as party animosities, and consequently war, can ever be abolished. Now, the sight of such an assembly as the late Congress, or, failing the sight of it, a good account of its proceedings, must tend to increase one's hope for human progress. People of all sorts and conditions—poor and rich, politicians and literary men, priests and men of no professed religion, merchants and agriculturists, aristocrats and democrats, monarchists and red republicans, soldiers and quakers, English and French, Germans and Italians, Anglo-Americans and Negroes, Dutchmen and Indian chiefs—were all assembled in the Paulskirche of that old Germanic town—the Paulskirche, once a church, lately a parliament house, and now a sort of temple of concord. They met together—jarring and conflicting elements as they seemed—to talk and think about the practicability of preserving peace all over the world. The speeches of Mr. Cobden and M. Emile Girardin, Mr. George Dawson and Elihu Burritt, the Ojibbeway Chief and Mr. Chipple, of New York, seem to have produced the most effect in the earlier portion of the proceedings, but we cannot help thinking that the speech of M. Suringar, of Holland, which was delivered near their close, contains more matter worthy of being repeated than most of the others, and the admonitory hints especially addressed to the members of the Congress, are at once practical and philosophical. We extract the following from the *résumé* given of this speech by the "Times Correspondent":—

The resolutions of the Congress were not, in his opinion, elaborated as they should have been, to induce all nations to accept their peaceful ideas. First, when the principle of self-defence was not admitted, there was little hope that peace societies would be found in Germany and in Holland. England and America might be able to exclude this principle, as they might be sure they never would be attacked by foreign nations; but he could not believe that while another nation would attack Holland, his own country, they would be obliged to say, "Come to us; we will not defend ourselves; we will do nothing." To advise a nation in humble circumstances to act thus would, in his opinion, be an exaggeration of the peace principle. If he were in error, so were millions of men. Nevertheless, he wished to be convinced, and he prayed the members of the Congress to enlighten him next year. Secondly, he thought that hitherto the Congress had been too prone to overlook the honors and glories of conquerors. It was not prudent to go from one extreme to another—to forget all the good services performed by armies of patriotic soldiers. A good

soldier could not have pleasure to kill one man, unless it was to save hundreds of others; and their Congress deliberations should be so conducted, that even soldiers could step forward and assist them. Thirdly, in asking for a simultaneous disarmament, the Congress should urge that governments legally provide for those who go out of their service, rather than leave them the prey of poverty. He advised that at their homes the members of the Congress should teach the necessity of a congress of delegates of all nations to make an international code, but with a special view to obtain the assistance of the most eminent men on earth. A future generation would undoubtedly accept their peaceful ideas; but, to realize this hope, hands and hearts must be prepared. With respect to war itself, he would say that he stood between two mountains. One was the mountain of war. It was composed of blood and tears. The errors and sins of mankind formed that mountain. But there was another mountain. The Almighty God was its creator. It was therefore a good—it was the best mountain. But it was extremely high. Would mankind get to the top? He scarcely believed it possible. But it was noble to advance to as high an altitude as possible. And this was to be done, not by hasty, but by steady steps. The Father of mankind had given them that example in His moral education of the world—it was done slowly, and with moderation, and with love. There were now great ideas in the heads and in the hearts of mankind. The idea of the unity of Germany was one of them—and that idea never could perish; it never could die, for it was immortal. If they did not see it realized, they must not despair. Their children and their children's children would see it realized. Universal peace was another of those great, noble ideas—an idea for the conception of which they wanted enthusiasm, but for its fulfilment calm. Napoleon had said that it was a great error to reorganize the world with special post-horses, and there was an invaluable proverb in the German language, "*Mas en echers ist schneidet nicht*," that was to say, "Exaggeration has spoiled many good things." This error greatly prevailed in these times. It was believed possible to correct all evil by a *coup d'état*. But that dream had exploded, he hoped. He would say, however, that there was one sufficient power in existence gradually to reform all evils; that power was faith in God, faith in His declarations, faith in His law. "God would not abandon mankind so long as mankind did not abandon God." An Indian chief had told them that he could make peace with a pipe; could not Christians make peace with the Bible?

With sincere wishes for the spread of pacific principles, and with all due respect for the benevolence and energy of their present advocates, I would yet remind them that it is possible to injure a good cause by unfair misrepresentations of the opposite party. And to that opposite party I would say, do not turn with contempt from new doctrines because they are new, and seem not to be practicable. Finally, let me quote, for the general benefit, the following words of one of our greatest modern philosophers—Samuel Taylor Coleridge:—"Above all, let it be remembered by both parties, and, indeed, by controversialists on all subjects, that every speculative error which boasts a multitude of advocates, has its golden as well as its dark side; that there is always some truth connected with it, the exclusive attention to which has misled the understanding—some moral beauty which has given it charms for the heart. Let it be remembered, that no assailant of an error can reasonably hope to be listened to by its advocates, who has not proved to them that he has seen the disputed subject in the same point of view, and is

capable of contemplating it with the same feelings as themselves; for why should we abandon a cause at the persuasions of one who is ignorant of the reasons which have attached us to it? Let it be remembered, that to write, however ably, merely to convince those who are already convinced, displays but the courage of a boaster; and in any subject to rail against the evil before we have inquired for the good, and to exasperate the passions of those who think with us, by caricaturing the opinions and blackening the motives of our antagonists, is to make the understanding the pander of the passions; and, even though we should have defended the right cause, to gain for ourselves ultimately from the good and wise no other praise than the Supreme Judge awarded to the friends of Job for their partial and uncharitable defence of His justice: '*My wrath is kindled against you; for ye have not spoken of me the thing which is right.*'"

From Sharpe's Magazine.

#### AUTOBIOGRAPHY OF JOHN BRITTON.

I do love these ancient ruins;  
We never tread upon them, but we set  
Our foot upon some reverend history;  
And, questionless, here, in this open court,  
(Which now lies naked to the injuries  
Of stormy weather,) some men lie interred,  
Who loved the church so well, and gave so largely to it,  
They thought it should have canopied their bones  
Till doomsday. But all things have their end:  
Churches and cities, which have diseases like to men,  
Must have like death which we have.

WEBSTER. *Duchess of Malfy.*

WE are pleased to meet with this noble tribute, paid by the old dramatist to departed greatness, in any work dedicated to topography or archaeology; and having to make a few remarks on the subject of topographical science, and on the career of one who has devoted a long and laborious life to the illustration of English antiquities, our readers will not think it ill-chosen, as a motto for our paper.

The study of English topography and antiquities has so many interesting bearings, that we cannot be surprised at its having found some zealous and able devotees. Regarded merely in its connection with historical investigation, the science of archaeology is entitled to hold a high place in our esteem. To the student of British history, there is assuredly no occupation more delightful than that of visiting the scenes of remarkable events, and examining the mouldering relics of ancient days—battle-fields, cathedrals, castles, and monastic ruins; comparing the architectural remains of different ages, and, by the aid of previously-acquired knowledge, and the habit of investigation and research, forming, or endeavoring to form, a judgment on the degree of artistic skill, or social refinement, to which a particular period may have attained. The study of topography, or archaeology, has also this advantage, that it makes every county, nay, almost every market town in old England, an object of interest; affords a plea for excellent excursions, by rail or road, and induces a healthy habit of taking periodical journeys for change of air and scene, which, having the merit of being undertaken for a purpose, in an earnest spirit, and with congenial companions, are free from the insipidity of some so-called pleasure trips; whilst they minister to the health of the mind and body, by leading to long walks and vig-

orous rambles, enlivened by entertaining disquisitions, and the constant flow of friendly discussion.

Among those who have done much—more, in fact, than is generally believed or admitted—towards the diffusion of a general taste for the study and investigation of English antiquities, (and for their careful preservation also,) we may unhesitatingly distinguish the literary veteran, John Britton, a portion of whose autobiography is now before us,\* and whose life and labors will form the subject of the present paper. At a period when only a few individuals, and those laborious and plodding antiquarians, with a sufficiency of learning, but with little taste, were engaged in such pursuits, the class of topographical works written or projected by Mr. Britton, being rendered as attractive as possible in character and appearance, and addressed to a wide range of readers, had a material influence in forming the public taste, and in popularizing antiquarian science. The impetus which has since been given to these studies, and the powerful combinations which have been formed for their advancement, have thrown the efforts of the zealous topographers whom John Britton may be said to represent somewhat in the shade; but we ought not to forget that in their generation they were most useful men, and, according to their means and opportunities, labored most successfully.

It will now be necessary for us to state some of the circumstances connected with the publication of Mr. Britton's autobiography. It appears that a few years since a number of friends who had long appreciated his usefulness and admired his character, determined to present him with some testimonial of their esteem. A subscription was set on foot, and a considerable sum of money raised. Mr. Britton was consulted as to the application of the fund; and he then intimated that the most agreeable testimonial which could be presented to him, would be the publication of a narrative of his own life, which he himself engaged to write. To quote the words of his prospectus:—"Instead of applying the money, thus collected, to purchase a piece of plate, or any fanciful but comparatively useless article, he considered that it would be more consonant to his pursuits in life, and to that occupation whereby he has attained his present respectability and competency, to produce a volume which would at once tell its own story, and explain the extent and characteristics of the numerous literary works he had projected and executed, whilst it might likewise serve as an incentive and exemplar to future aspirants for similar distinction." The work is as yet incomplete; though, for the last four years, Mr. Britton, (who has now passed his seventy-ninth year,) has labored upon it incessantly, and made all the efforts of which his declining strength was capable to bring it to a completion. Having been unable to accomplish his wish within the time he had intended, and finding infirmities stealing over him which required a respite and relaxation from literary toil, he has been induced to publish a portion of the work, that he might be left more at leisure to complete the remainder.

Our readers may not be displeased with a brief sketch of the disposition and habits of the literary veteran; and in the opening pages of the autobiography he thus introduces himself: "On the

\* The Autobiography of John Britton. Portion of Part I. with Appendix.

21st day of December, 1846, with the thermometer at 22°, and in the 76th year of my age, I commence writing a work which is intended to embrace a faithful and circumstantial memoir of my own public life and literary works. As that life has been protracted beyond the period scripturally ascribed to man—much longer, in fact, than that of any member of my family—and certainly exceeding the reasonable calculation which a Life Assurance Company would have assigned to it at any given time within the last fifty years, it may afford amusement to the student of longevity to be made acquainted with the constitutional peculiarities, as well as vicissitudes of sickness and health, which I have encountered from infancy to old age. These will be narrated in the course of the present narrative. \* \* \* It may be necessary, however, to premise that I am not, and never was, of a gloomy, morbid temperament; but, on the contrary, when in a fair state of health, I am, and always have been, sanguine, cheerful, hopeful, and confident. I have never sunk under *ennui* or despair; but, on the contrary, have looked forward and around for relief from present ailments and difficulties, as well as for the means of guarding against others." This happy temperament has carried Mr. Britton triumphantly through many troubles, and enabled him to surmount difficulties and obstacles of a most formidable character. But we will not anticipate his narrative.

He was born at Kington, a small village in Wiltshire, on the 7th of July, 1771; "being the first son, and fourth child, of parents who had been settled in their own copyhold premises about eight years." His father's occupations were those of baker, maltster, shop-keeper, and small farmer; and up to a certain period he was prosperous and successful in these various pursuits. But it was to his wife that he was mainly indebted for his success. Her active mind and lively disposition formed a strong contrast to his dulness and want of animation: she was "warm-hearted, animated, sanguine, anxious, and passionate," whilst he was "cold, saturnine, reserved, and phlegmatic." When, at length, the mother's time and attention became entirely occupied by an increasing family, the management of the business devolved on her husband; and "the consequences," observes the son, "were natural and inevitable. Customers contracted debts, and never paid them; the miller sent in bad flour, which made bad bread; rivals in trade secured the customers who were in debt; and ruin—complete and distressing ruin—was the result. My dear mother died broken-hearted; my sister Mary, at the age of about sixteen, was left to hold possession of the house, with a little furniture, and to take charge of two young brothers, aged about six and eight."

The picture of Kington, during Mr. Britton's boyhood, may serve to amuse the reader, and is not without its value as a faithful sketch of the rural life and manners of the period. "In part of my boyish days," he writes, "Kington had no resident squire, clergyman, or person above the rank of farmer, or village tradesman. There were ten agriculturists who kept horses, cows, and sheep, and about the same number of tradesmen, or dealers and chapmen;" but I do not think there was a newspaper or magazine purchased by one of the inhabitants before the year 1780, when the London riots were talked about, and wondered at. Five or six years afterwards, 'The Lady's Magazine' was taken in by one of the farmer's daughters, and

lent by her to my sister Elizabeth, who was fond of reading. One of the Bath papers was afterwards introduced to the village, and created an epoch—food for the gossip of the whole village. Farmer Robbins, our opposite neighbor, and Thomas, *alias* Tommy Collard, an old bachelor, both of whom seemed to live upon tittle-tattle, were the bearers and special messengers of all such news as they could comprehend and talk about through the whole extent of Kington; retailing it by pieces and scraps at the carpenter's, the tailor's, and the blacksmith's shops. At each of these houses they would devote about an hour to social converse, or rather, to colloquy; for the tradesmen, if employed on work, continued their occupation, and rarely interrupted the talkers with anything beyond—'Well, well!'—'Indeed!'—'Is it true?'—'Strange!'—'What! in foreign parts?'—'That Lunnun is a mortal queer place.'—'Well, I shall never see ut, nur any o' the papishes.' Roman Catholics, papists, and devils, were synonymous at Kington, and in many other country villages. I often accompanied my old news-friends in their daily rounds, and consequently listened with intense curiosity to their narratives. Mr. Robbins was aged, occupied a small dairy farm, which required but a very small portion of his time; and Mr. Collard lived upon a small annuity of about 30*l.*, and was called gentleman."

In his childhood and youth, Mr. Britton tells us that he was "ever active, inquisitive, emulous, ambitious, and sensitive, whether in play, at school, or at work;" but it was his misfortune that he found no one to direct those natural tendencies "in a right and laudable course." "It is true," he says, "I was placed under one schoolmistress, and, with some intervals, under four successive masters, all of whom were wholly unfitted for the arduous and important task of instructing their youthful pupils in the principles or elements of scholastic, and what may be called more useful knowledge. The masters were completely ignorant of science, of literature, and of manners; and, consequently, could not impart either to their pupils." The first of these pedagogues was named Mosely—a Baptist minister, whose spiritual performances, which took place in a sort of shed, dignified by the name of a chapel, were regularly attended by his scholars; but the worldly instruction received from this man was very trifling, and the only personal trait of which his pupil retained any recollection, was his powdered head, "with large formal curls over his ears, and mane-like, close-cropped hair around the neck." His next instructor was a Mr. Sparrow, who was "very unlike the Baptist; for he could write a good hand, knew the common rules of arithmetic, and could measure and calculate the acreage of a piece of land. He could also engrave ciphers and crests on silver spoons, and he even painted a white horse, and a white swan, for certain signboards." With a schoolmaster possessed of these extraordinary qualifications, he made rapid progress: but having remained with him as a boarder two years, he was summoned home, and was kept in idleness for the next twelvemonth.

He was then placed with a Mr. Stratton, "a dull, plodding, illiterate man," whose wife, however, was a clergyman's daughter, "and of manners and attainments superior to the station in which marriage had placed her." He remained here a year, and he does not omit to inform us that his constant playmate was his schoolmaster's

daughter, for whom he was afterwards destined to entertain a tender passion, which appears to have been suddenly kindled, and easily extinguished. The octogenarian\* thus describes this early love passage, and the young lady's subsequent career. "The Strattons," he says, "removed to Bath, where they established a school, and where the daughter displayed some qualifications for writing verses. After I had served an apprenticeship in London, I visited Bath, where I renewed my acquaintance with them, became fascinated with the writings, conversation, and person of the young poetess, and, after some months' correspondence, offered to make her my wife. Prudently and candidly she declined the overture, but we continued friends and correspondents till her decease, (unmarried,) but a short time since. For many years she belonged to the Salisbury dramatic corps, and enacted successfully most of the heroines of tragedy and comedy. Her letters from several towns, describing the adventures of herself and her 'vagabond' companions, as players are often uncharitably termed, are very curious and interesting."

The last school to which he was sent, was that of his old tutor, Mr. Sparrow, who had removed to the neighboring town of Chippenham, and opened a day-school there. Although he had possessed but few advantages, and had been generally consigned to the care of illiterate men, his school-time was a happy period. In spite of the ignorance and perverseness of the pedagogues, to whose care he had been generally committed, "School," he says, "was always delightful to me, and its succession of tasks and duties was easily and rapidly performed. The smell of new paper, a new copy-book, and any other novelties, were always exhilarating. I do not remember to have seen a dictionary before I visited London, in my seventeenth year. Geography, history, and books of instructive amusement, were unknown in that part of the country; nor did I ever hear of such periodicals as newspapers or magazines before I was fourteen."

At the age of thirteen he left school, and was required by his mother to assist in making bread and in attending to the farm. He was now compelled to rise early—on baking mornings at about four o'clock—and materially contribute towards converting a bag of flour into good and unadulterated bread: some of which he afterwards carried, on horseback, to villages and farm-houses."

We pass over all the other reminiscences of his village life, and proceed to detail the circumstances which led to his leaving Kington. His mother had a brother in London, named Samuel Hillier, moving in rather a genteel sphere of life, and holding a responsible and "respectable situation in the Chancery Office." This gentleman was in the habit of passing his Long Vacation in Wiltshire or Gloucestershire, and his rustic nephew was often invited to "make one of his party," during his stay in the country. The boy was naturally struck with the superiority of London manners; he contrasted the clownish deportment of his village associates with the refinement of his London relatives, and eagerly panted for an introduction to the great metropolis. Until he reached the age of sixteen, he visited his relatives as an equal; but after that period he was expected to serve them in a menial capacity, and he found his uncle (who, like all his mother's relations,

was very passionate) a harsh and strict task-master. At length, at the close of one Long Vacation, it was decided that he should accompany Mr. Hillier to London; and on the 25th October, 1787, he took leave of his native village, "receiving, on his departure, two small tokens of remembrance from his mother—a crown piece, and a pair of silver knee-buckles."

On his arrival in London, his uncle immediately apprenticed him for six years to Mr. Mendham, of the Jerusalem Tavern, Clerkenwell-green. He now entered on the most dreary and cheerless portion of his life. Engaged in a melancholy and monotonous routine, with nothing to interest him, or to call forth any powers of thought, his position was truly deplorable. He labored all day in a dark cellar—a damp, gloomy, London cavern—constantly occupied in bottling and corking wine. Accustomed to the fresh air of the country, his health soon became impaired, and, as may be readily imagined, he was very wretched indeed. One solitary half-hour in the morning, between seven and eight o'clock, he daily stole out of his prison-house, to look at the sky, breathe a little fresh air, and to visit two book-stalls in the neighborhood. In this way, and by reading at occasional intervals, "not of leisure, but of time abstracted from systematic duties," (and which he was compelled to make up for by extra toil,) he was enabled, during his "term of legal English slavery," to pick up some miscellaneous information, and to run through a variety of books on science, theology, and general literature.

Towards the end of his apprenticeship, Mr. Britton became acquainted with a person named Essex, who "obtained a very respectable livelihood by painting the figures on watch-faces," and who was fond of reading and rational conversation. Through Mr. Essex, he was introduced to two gentlemen then engaged in the profession of literature—the Rev. Dr. Trusler, and the Rev. Dr. Towers—and he at the same time formed an intimacy with Mr. Brayley, with whom he was afterwards closely associated in many of his literary undertakings. The two learned doctors were naturally regarded by the young tyro (as yet uninitiated in literary pursuits) with the deepest reverence; though it must be admitted they were not very exalted members of the craft. Trusler is best known as the author of "Hogarth Moralized." At that time he lived in Red Lion Street, Clerkenwell. "He had studied and practised physic," says Mr. Britton, "for some time; then took orders, and occasionally officiated as a curate." This divine adopted the notable expedient of printing sermons in type resembling manuscript. The speculation was highly successful; but it is said that the Bishop of London remonstrated with him on the impropriety of the scheme, as affording encouragement to clerical indolence; whereupon the doctor prudently replied "that he gained 150*l.* a year by his publication, but, if his lordship would give him a living of that value, his *script types* should no longer be put in requisition." Dr. Joseph Towers was a voluminous compiler of the same class, and at one time kept a bookseller's shop in Fore-street.

At length Mr. Britton was released from his galling servitude in the wine-cellar, and, to adopt the motto at the head of one of the chapters in his autobiography,—

Never did captive with a freer heart  
Cast off his chains of bondage.

But the period between his emancipation and his

\* We feel justified in applying this term to Mr. Britton, as he is just now entering his 80th year.



adoption of literature as a profession, involved, he tells us, seven years of vicissitudes, privations, and hardships. "In very poor and obscure lodgings," to quote his own words, "at eighteen-pence per week, I indulged in study, and often read in bed during the winter evenings, because I could not afford a fire. When my finances allowed, I frequented free-and-easy, odd fellows', and spouting clubs; but my expenses never exceeded sixpence a night at any of these associations of smokers, drinkers, and convivialists." One all-absorbing subject, however, engaged his attention on the expiration of his apprenticeship. In defiance of prudence, and following the dictates of a warm imagination, which pictured a fairy future, he had fallen head over ears in love. The object of his passion was a young lady's-maid from Devonshire, who had been in attendance on the wife of his late master, Mr Mendham, junior. During the last two years of his apprenticeship, he had made love very earnestly and sincerely to this young woman; but poor Mr. Britton soon found, and acutely felt, that the course of his passion was not destined to run smooth. The Mendhams interfered, and, considering the attachment a species of infatuation, gave it a sudden check by sending the fair lady's-maid back to Devonshire. Mr. Britton informs us that he was "too deeply smitten, and too intensely enthralled, to listen to or heed the influence of reason." He urged his suit, and "explained the misery he endured," in frequent letters to the absent fair one, to which she rather coldly responded by entreating him "to forego all hopes of marriage." However, as soon as he could obtain his liberty, he formed the project of walking into Wiltshire, remaining a few months with his relatives there, and thence proceeding on foot to Plympton, a distance of 216 miles from London, where "his Betsy" lived. Sustained by the warmth of his passion, he bravely accomplished this design, but was doomed, alas! to a bitter disappointment. He found "his fair, but faithless Dulcinea, sought an interview, and was soon convinced that he was wrong and foolish in making such a tour." The lady altogether failed to appreciate his romantic passion; the Devonshire walk did not soften her heart; and poor Mr. Britton was plunged into the extremity of despair. He returned to his inn, he tells us, "disconsolate and almost deranged;" his hopes were literally blighted; "there was no cheering gleam in the future;" and he thought of consumption and early death. "In this state of hopeless despair," he directed his infirm steps towards London. Sometimes he attempted to read by the wayside; but he found no consolation in the pocket companions, which, under other circumstances, might have cheered and amused him. Sterne's "Sentimental Journey," Lord Chesterfield's "Principles of Politeness," and Goldsmith's Poems, afforded no balm or relief to the wounded lover. Dreadful to relate, he more than once meditated self-murder; and, what was a more sensible thing, he "*drank many glasses of rum and milk*, his only favorite beverage, in the hope that it would banish care, and exhilarate the spirits." Believing that there may be many, even among the readers of this magazine, who, like Mr. Britton, have "oved not wisely, but too well," we have condensed for general edification these touching reminiscences of his hopeless passion; and we would more particularly draw attention to the last-mentioned mode of alleviating sorrow and soothing the pangs of blighted affection!

The love-stricken swain returned to London in a  
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piteous plight; he was well-nigh penniless, shoeless, and shirtless, and his abject poverty had compelled him, in spite of the struggles of filial affection, to change the crown piece, and sell the silver knee-buckles, which his poor mother had given him at parting. At length he obtained employment as cellar-man at the London Tavern—an irksome and slavish situation, and full of grievous discomforts. He was afterwards engaged as "clerk and cellar-man to a widow in Smithfield, whose cajoling and bland language flattered his youthful vanity." She called him "sir," and treated him as a confidential clerk, but kept him in a disagreeable state of suspense by making him responsible, out of his miserable wages, for every light shilling and bad guinea taken in her establishment. "During this engagement," he informs us that he "lodged with a tinman in Smithfield Bars, having a bed-room, about nine feet by seven, for which he paid 1s. 6d. per week." This tinman was a devout Hunting-tonian, or follower of the strange fanatic, William Huntington, S. S.;\* but his young lodger was anything but edified by his devotions.

Mr. Britton's next engagement was "with Mr. Simpson, an attorney, in Holborn Court, (now called South Square,) Gray's Inn; where and with whom he continued three years, at the humble wages (dignified with the name of salary) of fifteen shillings a week." But though the remuneration was small, the employment was more congenial to his disposition than his previous occupations; and as Mr. Simpson had not much business, he found ample time for reading; although he confesses that the books which then engaged his attention were of rather a frivolous nature. "During nearly the whole of these three years," he tells us that it was his "custom to dine at an eating-house in Great Turnstile, Holborn, on very cheap and moderate fare; the cost of the meal, with beer, seldom exceeding ninepence." The parlor of this humble establishment was occasionally frequented by some remarkable characters; amongst others, by the *Chevalier d'Eon*, whose story is well-known, and who had then assumed female attire, after having been distinguished in the male character as a soldier and diplomatist; and *Sir Charles Dinely, Bart.*, one of the Poor Knights of Windsor, famous for his harmless eccentricities and matrimonial maia. Whilst residing with Mr. Simpson, he also paid some professional visits to Mr. Joseph Ritson, who then practised as a special pleader, and was occasionally employed by Mr. Simpson. Mr. Britton thus describes the appearance of this learned and estimable man: "He was small in person, thin, consumptive in appearance, reserved in manners, and, at the time I knew him, had but little professional practice. Attorneys in general, though there are many laudable exceptions, have not much respect for poetry or poets, and consider that the man who devotes his time and thoughts to polite literature, can have little partiality for the dull verbiage of the Statutes at Large, or the sophisticated and delusive language too often employed in special pleading." If Mr. Ritson was no favorite of the attorneys, he amply revenged himself on them for not properly appreciating his merits by wholesale and indiscriminate vituperation. "His opinion of

\* We need scarcely remind our readers that Huntington adopted these letters to signify that he was a "saved sinner;" though, in lieu of this title, blasphemously conferred upon himself, Mathews, the comedian, suggested, as Mr. Britton informs us, that the letters should be interpreted, "sad scoundrel."

the attorneys," adds Mr. Britton, "*is too strongly expressed* ; 'I have found them (thus speaks Mr. Britton, the special-pleader) not only the most ignorant and capricious, but the most insincere, unprincipled, and, in every respect, the most worthless of men.'"

The death of Mr. Simpson, in 1798, threw Mr. Britton out of employment ; but, "after some weeks of inquiry and suspense," he obtained an engagement with Messrs. Parker & Wix, Solicitors, of Greville Street, Hatton Garden, at a salary of 20s. a week. In this establishment he formed the acquaintance of a young gentleman, who was professedly reading for the bar, under the guidance of Mr. Parker ; but "whose volatility of temperament and poetical mind," (though he was repeatedly advised and admonished,) "could not be induced to take an interest, or find amusement, in the dull technicalities and prolix verbiage of law-books." Like many young men of ardent imagination, similarly situated, he neglected his Blackstone and Coke upon Littleton, for private theatres and debating societies. Mr. Britton's partiality for the theatre, and the interest which he took in literature, raised him in the estimation of the warm-hearted student, and they quickly became close friends. They visited together the principal debating societies in the metropolis, where the rising spirits of the age tried their powers of oratory, and where Mr. Hughes (for that was the student's name) was a fluent and successful speaker. These pursuits might not be considered altogether useless to the future barrister ; but, unfortunately, Mr. Hughes also plunged deep into private theatricals, and his time and attention were often occupied in inditing farces, and in preparing for their representation. Mr. Parker was greatly displeased, and reproved both his pupil and his associate in suitable terms ; but, in the end, the former forsook the law, was appointed to an official post in the West Indies, and married a rich widow.

Although unable to take a very prominent part in their proceedings, Mr. Britton informs us that he continued to attend the various spouting clubs and debating societies with which the metropolis was then rife. His recitations were generally in the comic style, "and were often received," according to his own statement, "with vociferous and clamorous applause." He was a regular member of the "School of Eloquence," in Old Change, Cheapside, where a number of young men, "who aspired to the honors of Demosthenes and Cicero," assembled once a week. "My old friend, Mr. R. A. Davenport," adds Mr. Britton, "who has, since that time, written a vast number of volumes on poetry, history, and biography, threatened the members of the 'School of Eloquence' with a satirical exposé of their oratorical proceedings, and gave the following lines as the motto of his Philippic :—

*Shate of Demosthenes !\* couldst thou but view  
This ranting, blundering, language-murdering crew,  
Much should I wonder, if, in furious ire,  
Thou didst not kick them to their sooty sire.*

Many political societies, where the characters of public men and measures were freely discussed, were also at this period in active operation, and were often frequented by Mr. Britton. Most of them had been called into existence by the outbreak of the French Revolution, and the principles of

\* The speakers were in the frequent habit of invoking the "Shade of Demosthenes."

democracy were warmly and strenuously advocated by the leading members.

We must now pause. Mr. Britton has not yet carried the narrative of his life beyond this point ; but having derived much amusement from the slight portion with which he has favored his friends, we heartily wish him health and strength to complete it. He informs us, in his explanatory address, that little more than one third of his autobiography is now presented. "That portion," he says, "reviews the period of boyhood and adolescence, and describes a desultory mode of life, with reference to debating societies, private theatres, and some public events and persons, before my final devotion to literature, in my thirtieth year. Henceforward, to the present time, all my energies have been devoted, most anxiously and industriously, to reading, writing, and the technical management of book-publishing. An extensive intercourse has thereby been created with artists, stationers, printers, booksellers, and publishers ; with professional and amateur critics ; with the ordinary purchasers and readers of books ; and with the class, now almost extinct, of bibliomaniacs. My intercommunion with these, and other public persons, will furnish abundant materials for the continuation of the First Part of the Autobiography."

Our readers will be able to judge from the foregoing extract of the course the narrative is likely to take, if Mr. Britton is able to complete it. Perhaps the most interesting portion will prove to be the relation of early struggles, trials, and difficulties which we have attempted to follow in this paper, and which now breaks off abruptly at a critical period of Mr. Britton's life. In the next section he promises to narrate his first crude attempts in literature, and the remainder will be devoted to a general account of his professional career.

Mr. Britton's works, of which a list is given in the Second Part of the Autobiography, consist almost entirely (as we need perhaps scarcely remind our readers) of industrious compilations on topographical subjects, which have the paramount merit of clearness and accuracy. Mr. T. E. Jones, who has edited this portion of the work, has thus eulogized, and we cannot say altogether extravagantly, his friend's productions. "In every page of every work," he says, "from 'the Beauties of Wiltshire,' in 1801, to 'Junius Elucidated,' in 1848, candor and explicitness prevail. An earnest desire to record 'the truth, the whole truth, and nothing but the truth,' an enthusiastic ardor in investigation, a liberality of sentiment, an honesty in acknowledging obligations to others, and the strictest accuracy of reference—these are qualities of which any author might be proud, and in these it may be confidently asserted, that John Britton is not surpassed by any writer."

In referring to the enumeration of Mr. Britton's topographical works, we find a large portion devoted to the history and antiquities of his native county ; and it may be here remarked that the parish of Kingston St. Michael, in which Mr. Britton was born, was also the birth-place of the renowned antiquary, John Aubrey. Mr. Britton's career, as a topographical writer, commenced with the *Beauties of Wiltshire*, of which the first volume was published in 1801. When first urged to undertake this work, he confesses that he "was but little qualified for the duties of a topographer," and that he was "hardly enough to put to sea, without either rudder, compass, or chart." Having made a pedestrian tour with Mr. Brayley, in the summer

and autumn of 1800, and acquired considerable experience and information, he proceeded with more confidence to fulfil his engagement; and, subsequently, in conjunction with Mr. Brayley, he wrote an account of Bedfordshire for the "Beauties of England and Wales;" a work of some magnitude and popularity, commenced in 1801, and completed in 1816; and, upon which, it is said, the publishers expended upwards of 50,000*l*. To this publication Mr. Britton afterwards contributed the history of Wiltshire, and also materially assisted in the compilation of other portions. Mr. Britton's labors in the illustration of English cathedral antiquities are worthy of especial notice, and will confer upon him a lasting reputation. Commencing with the "History and Antiquities of the Cathedral Church of Salisbury," in 1814, he proceeded to describe in succession most of the other cathedral churches of England, and the series was brought to a conclusion in 1835. Many works on biography, antiquity, and the fine arts, have also proceeded from Mr. Britton's pen, which bear witness to his industry, extensive information, and facility of composition.

We must not omit to state that an appendix of gossiping essays is annexed to the second part of the Autobiography; in which we are informed that "it has been the writer's wish and earnest endeavor to show to the young author, and to other emulous readers, what may be effected by zeal and industry, with very humble talents, and without academic learning." First in order, we have some "Essays on the Characteristics of Shakspeare; with Lines on the Stratford Bust, by Henry Neele," (whose early death was a calamity to literature;) and as the latter were addressed to Mr. Britton, and are full of beauty, we will quote the commencement.

His was the master-spirit; at his spells  
The heart gave up his secrets; like the mount  
Of Horeb, smitten by the prophet's rod,  
Its hidden springs gush'd forth. Time, that gray rock  
On whose bleak sides the fame of meaner bards  
Is dashed to ruin, was the pedestal  
On which his genius rose; and, rooted there,  
Stands like a mighty statue, reared so high  
Above the clouds and changes of the world,  
That heaven's unshorn and unimpeded beams  
Have round its awful brows a glory shed,  
Immortal as their own.

In conclusion, we congratulate the subscribers to the *Britton Testimonial* on the mode which has been adopted to do honor to their old friend; and we trust, moreover, that before long the completion of the Autobiography will impose upon us the agreeable task of recounting the remaining incidents of Mr. Britton's useful and laborious life.

From the Spectator.

#### EVERY MUNCHAUSEN HIS OWN WOLF.

AMONG the many revolutions which are vainly struggling for development in Germany, is one in the bill of fare. A Berlin association is attempting to restore horse flesh to the common dietary. "It is reserved for the nineteenth century," they say, "to restore horse flesh to its true place as an article of consumption." The mode of their agitation is, to associate, to write, and to dine. With a noble patriotism they cite the habit of the ancient Germans, the still surviving custom of the Tartars, and the repeated permission given by the Austrian government. It does not appear, however, that the agitation prospers. It is doubtful whether the epicures of Vienna make the slightest use of the paternal permission, and the Berlin associators cannot entice the public.

Indeed, the prejudice of the public has some solid

and practical grounds. Horse flesh is hard, unless perhaps it were specially bred with an eye not to the stable but the table. Horses are expensive. Men object to feeding upon their habitual companions; even the pet lamb is sacred to the butcher; but the horse is every man's pet lamb—while he is young, sleek, and wholesome. From the fact that the horse is so constantly used in the wear and tear of life, there could be no security that the butcher would not deal with the knacker rather than the grazier. So we are as little likely to seek for a dinner under the saddle as in the dog-kennel.

The reasons for the movement do not appear. One might imagine that the Austrian government, moved by the distress following intestine war, wishes to point out a mode by which the rigor may be relaxed; but surely the paternal governors forget how many of their subjects have had the opportunity of learning to relish horse flesh by being placed in a state of siege. Perhaps the bankrupt ministry may have an eye to selling off old cavalry stores. Perhaps the Berlin motive is that which has instigated our own mediæval enthusiasts to revive quaint pictures in which the people have lank flanks and heads grotesquely cocked—models imitated by certain religious enthusiasts who cock their own heads and their elbows in the painted window style, turn in their toes to typify hatred of the Reformation, and coax their flanks to look as lank as they can. But these ingenious persons have no following; they cannot induce the public to wear lank hair, or accommodate its attitudes to the earnest incompetency of mediæval artists; and, in like manner, the Berlin hippophagi cannot induce the public at large to take example by the ancient Germans, or by the Tartars; or to imitate besieged folks in falling back for a dinner, after a sortie, upon their cavalry. It is said, indeed, that they have not used their most inviting selection, since they have tried to push off hacks and old cab-horses; but surely this is the only process in the horse revival; a bent and ewe-necked horse is equivalent to a painted Saint Triptolemus with much elbow and no appreciable abdomen. Besides, it is the right order of things; you cannot eat a horse and ride him afterwards.

#### ABOLITION OF CHRISTMAS-BOXES.

ANOTHER blow is dealt at Christmas boxes. They are abolished in the public offices, discontinued by certain city magnates, and will of course be dropped by the thrifty. The practice may be regarded as the remnant of a custom which redressed in some trifling degree the inequalities of means at a season of festivity, and signified on the natal day of Christianity good-will amongst men. The custom, however, had been vitiated by abuse; it had degenerated from a free-will gift to a stated demand, and had thus lost the original qualities which had recommended it.

As to genuine gratuities, it is neither to be expected nor desired that they should cease. They are the spontaneous tribute of the richer who are served to the poorer who have rendered service either not stipulated or enhanced beyond the stipulation by some grace of good-will and heartiness; and if they are rendered at a season when wind-falls are peculiarly pleasant and the expression is peculiarly fitting, they acquire a value beyond that of the shilling which purchases some special service from "boots" or porter. The trade in Christmas-boxes merits no defence; it is to be hoped that the free-will offering needs none.—*Spectator*.

From the Spectator.

# SACK OF ROME BY THE DUKE OF BOURBON'S ARMY.

FROM DENNISTOUN'S MEMOIRS OF THE DUKE OF URBINO.

THE first Duke of Urbino of the Della Rovere line was commander of the allied army that *might* perhaps have saved Rome from Bourbon's assault, and at all events should have tried; as his force could without question have destroyed the Emperor's army after its leader's death. This rather remote connection with his subject induces Mr. Dennistoun to give a full description of the previous campaign, and of the assault and sack. Although it has been often done, his account is about the best we have met. Mr. Dennistoun has had recourse to manuscript authorities, which give particulars not to be found in books; he touches the vices of the Romans as well as those of their assailants; and he brings out the ribald jocularities of the black bands. This is part of the picture.

Now began the horrors of the sack. The brutal soldiery, absolved from discipline, scoured the city at will, penetrating unchallenged into the most secret and most sacred places. Churches and convents, palaces and houses, were invaded and rifled; resistance was punished with fire and sword; rape and murder were the fate of the inhabitants. Passing over details too revolting for the imagination to supply, but too repulsive for a place in these pages, we may cite the feeling exclamations of one who seems to have witnessed them. "Alas, how many courtiers, gentlemen, and prelates, how many devout nuns, matrons, and maidens, became a prey to these savages! what chalices, images, crucifixes, vessels of silver and gold, were torn from the altars by these sacrilegious hands! what holy relics were dashed to the ground with derisive blasphemy by these brutal Lutherans! The heads of Saints Peter, Paul, Andrew, and of many others, the wood of the sacred cross, the blessed oil, and the sacramental wafers, were ruthlessly trodden upon. The streets exhibited heaps of rich furniture, vestments, and plate, all the wealth and splendor of the Roman court, pillaged by the basest ruffians."

After these miserable scenes had endured for three days, rumors of the Duke of Urbino's approach recalled the Imperialist leaders to the necessity of defence. The command having devolved upon the Prince of Orange, a yellow-haired barbarian, further plunder was prohibited, under severe penalties; and the army, reduced to comparative order, betook themselves to enjoy their booty. But now a new drama of atrocities opened. The Germans had especially distinguished themselves by a thirst for blood; but the wily Spaniards taught them a means more effectual than murder of enriching themselves and punishing their victims. The prisoners had in most cases concealed whatever of greatest value they possessed, and recourse was had to every variety of torment in order to extract from them supposed treasures, and a ransom for their lives; so that those who had been spared in seeming mercy found themselves but reserved for a worse fate. After stripes and blows had been exhausted, when hunger and thirst had failed to force compliance, tortures the most brutal succeeded. Some were suspended naked from their own windows by a

sensitive limb, or swung head downwards, and momentarily threatened to be let drop into the street: others had their teeth drawn slowly and singly, or were compelled to swallow their own mutilated and roasted members; others were forced to perform the most odious and menial services; and the greatest extremities were always used towards those who were suspected of being the most wealthy and noble. Even after the desired amount of gold had been thus extorted from them, their sufferings were sometimes resumed at the instance of new tormentors. When such cruelties palled, their inflictors had recourse to a novel amusement, by forcing from the victims a confession of their sins; and we are assured by the narrator of these enormities, himself a Roman, that the iniquities thus brought to light, as habitual in that dissolute capital, were such as to confound even the licentious soldiery of Bourbon. Over the outrages committed upon the women we draw a veil: when lust was satiated, they were prolonged in diabolical punishment; the husbands and fathers being compulsory witnesses to such unspeakable atrocities.

But the delight of these sacrilegious villains, especially of the German Lutherans, was to outrage everything holy. The churches and chapels, including the now blood-stained St. Peter's, were desecrated into stables, taverns, or brothels; and the choirs, whence no sounds had breathed but the elevating chant of prayer and praise, rang with base ribaldry and blasphemous imprecations. The grand creations of religious art were wantonly insulted or damaged; the reliquaries and miraculous images were pillaged or defaced. Nay, a poor priest was inhumanly murdered for his firm refusal to administer the blessed sacrament to an ass. Nor was any respect paid to persons or party feelings. The subjects of the Emperor who happened to be in Rome, the adherents of the Colonna and other Ghibelline leaders, were all involved in the general fate. Four cardinals attached to that faction had declined entering S. Angelo, calculating that they would not only

Guide the whirlwind and direct the storm,

but, peradventure, promote their own interests in the *mêlée*. They were, however, miserably mistaken, for they too were held to ransom; and one of them, (Araceli,) after being often led through the streets tied on a donkey behind a common soldier, was carried to church with mock funereal rites, when the office of the dead was read over his living body, and an oration pronounced, wherein, for eulogy, were loathsomely related all the real or alleged immoralities of his past life. Another outrage in especial repute with the Germans was a ribald procession, in which some low buffoon in sacred vestments was borne shoulder-high, scattering mock benedictions among the mob, amid shouts of "Long live Luther!"

From the Examiner.

## LAWRENCE'S PORTRAIT OF SIR ROBERT PEEL.

MANIFOLD as have been the attempts to perpetuate the face of Sir Robert Peel, we have nothing comparable to Lawrence's masterly portrait. It was painted one and twenty years ago, when the statesman was in his prime of manhood, and when all the peculiarities of feature and expression, which became afterwards so familiar and so justly endeared, were at once fully developed and yet untouched by time. What we miss is the portly fulness of per



mon. Everything else is here as we would most desire it to be remembered—the quiet energy of look, the homely simplicity of expression, the compressed lip and eager eye, the business-like manner and attitude. It is a good Saxon face—handsome yet shrewd; not without a certain dignified air, but with something besides which better wins and holds attention. One could not possibly wish the statesman, to whom we owe so much, more fully presented to posterity.

The engraving before us is by Mr. Cousins, A. R. A., and has just been issued by Messrs. Dominic Colnaghi, of Pall Mall East. It is the third plate which has been made of this masterpiece of Lawrence. The first and second, which were the work of Mr. Charles Turner, have been worn out for some years; and it appears to have been the wish of Sir Robert himself that Mr. Cousins should have the opportunity of executing a third engraving. He has triumphantly justified the choice. In depth of expression, and clear and spirited execution, he has never excelled this print. The delicate play and animation of the features, the management of lights and shadows in the picture, the finish of details, are entitled to the highest praise. Lawrence would have thanked him for so truly conveying the fact, that this was the painting of a gentleman by a gentleman.

We did not know that Sir Robert Peel refused to sit for any fresh portrait (with the exception of that by Winterhalter) for some years before his death. But the dull exaggerations of him current in the print-shops are thus explained. It seems that he took fright at the horror of one particular achievement in this line, to which he had lent his countenance, and very properly refused to lend it any more for similar un-Christian purposes. Not more than a year before his death he declined to sit even for Lord Aberdeen, and begged that the picture by Lawrence might be copied instead. We cannot wonder that it was a favorite with him, even apart from its superiority as a work of art. One's friends should surely be allowed to see us at our best, and before the inroads of care or time.

From the Spectator, 4 January.

#### NEWS OF THE WEEK.

THE commencement of "the second half of the nineteenth century," on the first of January, 1851, strongly impresses the feelings of journalism; and accordingly the papers teem with various versions of a spirit distilled, skilfully and effectively, from the last fifty volumes of the Annual Register. We have the historical review of the half century, and the social, the scientific, and the political, the domestic and the foreign. The *Times* displays an hydraulic pressure of condensation such as befits its gigantic power, and gives us, in a column and a half, the series of salient events and actors, from Pitt to Peel—all rather cheerful, and mighty pleasant to read. The *Daily News* is Continental, and pours forth a jeremiad on the recent revolution, which has "flung back Europe" to the state not of 1847 but of 1800. The *Morning Chronicle* on the contrary, finds Germany "stronger and freer," "serfdom abolished in the centre of Europe," and France endowed with "the elements of constitutional freedom."

As usual, the more hopeful is the truer. To believe in practical retrogression on a broad scale, is to forget the very laws of political physiology. Schwarzenberg is a "wretched politician," and he

is trying "to fling Germany at the feet of Russia;" but the advance abroad is considerable as well as at home. France has had tremendous oscillations, but the onward bound always exceeds the backward. Belgium has stood firm; Holland is liberalized; Spain and Portugal, if still semi-barbarian, are free; Turkey itself is reforming; Frenchmen, Italians, Germans, know ten times what they did, even Russians are learning; politically under a cloud, Hungary is socially freer; the American Republic is a great power in the world.

At home, the half century has greatly changed the aspect of society; where all was tory suppression at the beginning, all is thrown open now. We have gained freedom, political, religious, and commercial; food, clothes, and lodging are cheaper; the appliances of life, intellectual and material, pleasurable and useful, have been multiplied in every class. We have clubs for the wealthy, atheneums and mechanics' institutes for the humbler; the factory system, which dresses the women of the working class like the ladies of the last century, is the creation of the epoch which has given us railways, steam-ships, electric telegraph, the Rosse telescope, photography; "mesmerism" says the *Post*, and "chloroform;" also, cries the American, California.

So much for the past; what of the future! Even of that unopened region we have, under correction, some knowledge; we know at least what ministers and Parliament have set down to do, in continuation. We remember Lord John Russell's bills about the suffrage, and Mr. Labouchere's about navigation; we remember law reforms to be done; Ireland is always on hand; we remember the measures which Mr. Baines has been cogitating ever since he took Charles Buller's place, and which he is understood to destine for "positively next session;" above all, we remember that the revision of the income-tax will raise the whole question of financial reform. Of course, it is not to be expected that Lord John Russell, however irrepressible his Protestant fervor, will be able to appropriate the *whole* of the session to the Pope?

Socially, we are looking forward to at least one event—the Exposition of Industry; not only for its own sake, but for the sake of the vast visiting which will make next summer the busiest holiday that the world has ever seen.

But possibly we may have a yet deeper interest in the unforeseen than in the foreseen. We can all remember the dull doubt and scepticism which threw cold and sulky sneers upon the promises of practical science—of steam and electricity, of the railway and the steam-ship.

Looking back on the path we have come, and standing on the threshold of another half century, we ask, in an admiring but not an exacting spirit, what in that period will be the unforeseen equivalents of chloroform and photography; of the Rosse telescope, the oxyhydrogen microscope, and Crosse's electrical magic; of the electric telegraph, of the steam-ship, and the railway?

It is an economy for our organ of wonder, that in turning from the view of half centuries to the single week, no truly great events are wasted upon the inevitable baths. The second part of the Bennett correspondence, in which Sir John Herrington and friends are trying to convince the adder-deaf Bishop of London that Mr. Bennett has not resigned, fails to pique the attention; and the mind is too tired to relish that other correspondence, in which the Bishop of Oxford fences with

a worthy gentleman who accuses him of winking at Tractarian observances among his clergy.

Perhaps the most novel contribution to the disputation is the reply of the *Times* to the Earl of St. Germans. The Leading Journal volunteers to lift the ministry off the horns of the dilemma in which it had been placed. Lord St. Germans had asked how you could enforce in England an Anti-Catholic policy, unless you were to enforce it in Ireland too, equally in defence of "the United Church of England and Ireland;" but how could you enforce in Ireland a policy which would undo the work of the last twenty years! The *Times* poohpoohs this deference to Ireland—"the spoilt child of the empire." The journalist cannot understand how you are to slight the "feeling of sixteen millions of English Protestants, for fear the feelings of one half the number of Irish Catholics might be hurt;" or how you are to waive defending the Established Church in England and the English Protestants, lest you should weaken the "ecclesiastical position of as small number of Irish Episcopalians," and "render in the least degree more precarious the tottering position of the unpeopled Establishment of the Protestant Church in Ireland," which is notoriously "not the church of the Irish people." We will not pause to scrutinize the confusion of the Established Church with "the Protestants of England," as if they were convertible terms. The argument of the *Times* amounts to this—that you must obey the feeling of the majority, even though you abandon "the unpeopled Church" in Ireland, heedless of destroying the unity. Very good; but in that case, if you protect and freshly establish the Church of "the majority" in England, by a parity of reasoning you are bound to protect and establish the Church of the majority in Ireland. That would indeed be equality; if you sacrifice "the small number of Episcopalians in Ireland," perhaps you earn the right to sacrifice a small number of Romanists in England; but if you are bound to maintain and establish the Church of the majority in England, you are equally bound to maintain and establish the Church of the majority in Ireland. Such is the new horn upon which the *Times* sticks its protégés the ministers.

FINANCE has been taking rather an important turn among the subjects of public discussion; there is a report of a surplus revenue, and before the surplus is published men are canvassing the best way of spending it; and some attention has been drawn, once more, to the flux and reflux of the precious metals.

For the surplus revenue—reported at "more than 3,000,000*l.*"—various claims are put in; the first and most public being that on behalf of the paper-duty. At the London Tavern meeting, the old anti-paper-tax party was ably represented by Mr. Cowan and Mr. Milner Gibson; but the Chartists, represented by Mr. Holyoake, proposed a considerable extension of the resolutions against all the "taxes on knowledge," especially the newspaper and the advertisement duties; and the augmentation was adopted, not only without opposition, but with alacrity.

The *Times*, however, implies that the surplus is already appropriated by ministers, and that the window-tax, which so narrowly escaped last session, is as good as doomed. It is not to be forgotten, however, that the income-tax has to be reviewed, and Parliament may be induced to refuse that "inquisitorial" impost; or it may be induced

to widen the revision of the whole system of taxation and expenditure.

The gold anxieties are, for the public at large, more theoretical. Last week, the bank startled tranquil folks by raising its rate of discount; but the explanation was, that the bank was only following the established rule on the efflux of bullion and increase of securities. "It is only the bullion going out," said the quietist; just as the Londoner, startled by a mysterious rumbling in his house, like an earthquake going to begin, is told that it is "only the water coming in," and the household moves on undisturbed.

But why does the bullion run out? Oh! it is only going to France, to be coined while it may; the French government having resolved to coin no more after a certain day, because a golden flood is expected from California. In point of fact, gold has for a time altered its apparent relations with silver. A contemporary, of painstaking celebrity in its monetary matters, states, that whereas in 1840 the product of gold was about 16 as compared with 84 of silver, in 1850 the product of gold has been about 65 to 35 of silver.

A counteractive to this disturbed relation is the increased produce of quicksilver, which will supply material for working many disused silver-mines; and that counteractive is supplied by the same region that caused the disturbance of the ratios—California, rich in quicksilver as well as gold. The precious metals are likely to be at least more abundant; prices will seem to rise, and gold and silver wares will multiply and be cheaper; but the world will go on pretty much as before—though with occasional wonderings in that most sensitive of beings, the money-market.

From the *Times*.

#### CONSTITUTION AND FUTURE DESTINY OF AMERICA.

SIR Henry Bulwer has just established a conspicuous title to the post which he has been selected to fill. At a banquet crowded by enthusiastic New Englanders, assembled in celebration of their most famous anniversary—Forefathers' Day—he outshone even American eloquence upon American topics, and so plied his delighted audience with the tropes of rhetoric and the brilliancies of metaphor, that he fairly carried the field before him. Yet he had no easy task to perform. Mr. Webster had anticipated every favorite apostrophe, and had led his countrymen through the history of 230 years to that moment of pride with which the moiety of a century was closing. But no sooner had Sir Henry warned in his discourse than he elaborated every familiar point of trans-atlantic oratory, and, without disparaging his own allegiance, succeeded in satisfying every aspiration of American pride.

In simple truth the two speakers had a straight and obvious course to run. They could well afford to join hands in congratulation and compliment. At this marked period of history and chronology there are but two civilized governments in the world the citizens of which could solemnize such a festival as that reported from New York; and the events of the last two years have amply shown that a constitutional monarchy and a constitutional republic differ only in political terms when contrasted with military tyrannies or democratic experiments. When M. Guizot elucidated for the benefit of his countrymen the principles of successful revolutions, he confined his illustrations to two examples—that

of England in 1688 and America in 1776, and he frankly confessed that forms of government signified little so long as the securities of good administration were supplied by the self-denial, forbearance, and moderation of the people concerned. No governments can be either durable or prosperous without the submission of individual conceit to the resolutions of the nations as legally declared. There exists in the United States, no less than under absolute monarchies, a party discontented with the established order of affairs, and the violence of political dissent has lately been carried to such a pitch as to elicit suggestions for the abrogation of the constitution itself. But the great body of Americans are sound in their convictions and clear-sighted in their views. They have had their 10th of April, like ourselves, and, after a short struggle and a great deal of noise, they declared in the theatrical riots that the magistracy should rule the mob, and in the slavery agitation that the constitution should rule the country.

But it was not the declaration of independence or the foundation of the republic which the New Englanders met to celebrate on the occasion to which we refer. It was an anniversary more completely commanding the sympathies of a British minister, and well calculated to unite in emotions of common pride the Englishman of the Old World and the New. Two hundred and thirty years ago, within a few days of the time when the religious convulsions of Germany were inaugurated by the great battle of Prague, a handful of pilgrim fathers landed at Cape Cod from the "Mayflower" bark, after a perilous and stormy voyage across the Atlantic deep. On a piece of rising ground they built a row of small tenements, with a common storehouse between them. Strong they were in faith, in hope, and resolution, but so straitened were their means that when another batch of pilgrims arrived to share their fortunes, the entertainment provided for the new comers consisted of a single lobster and three fish, and these not caught, but purchased of the Indians, for in the whole colony there was neither hook nor net. The pilgrims held their own, and transmitted their settlement to their progeny, but with a tenure so precarious that their bones were buried without mark or sign, to preserve them from the desecration of the savages who might one day recover the ground.

Such was the origin of New England—a glorious topic, it must needs be owned, for justifiable declamation. These 41 families are now represented by 3,000,000 souls. From a single port of that settlement, where neither hook nor net existed, there now issue annually 600 ships, manned by 16,000 seamen, to capture the mightiest monsters of the deep. The capital of the colony contains nearly 150,000 inhabitants within its walls; supports 16 daily and 50 weekly newspapers, and maintains 250 public carriages, employing 1,600 horses, irrespectively of 7 railways, each of which upon an average conveys 1,000 passengers per day. Such is the picture of modern Boston as delineated on the last anniversary of Pilgrim's Day; and happy it is for England and America when their representatives can unite in expatiating on these wonderful statistics, instead of awakening the injurious and forgotten echoes of Bunker's Hill.

That the Americans owe to their ancient stock the qualities which enable them to found and preserve their system of commonwealths is a fact which they may acknowledge without disparagement of their intrinsic powers. They carried with them across the ocean, not only the forms of good

government, but the principles of good citizenship. They never built upon political theories, or affected any change except upon sound reasons and by sober means. They did not substitute a republic for a monarchy in deference to any imaginary code of rights antecedent to recorded laws, but when, in pursuance of settled convictions, they had reluctantly renounced an allegiance, they made the best provisions in their power for administering the government themselves. Little was changed beyond the form of the executive. They devised no new relations between man and man, nor did they deem themselves competent to recast the frame of civil society. They retained every institution and practice which could be accommodated to a congress instead of a king. Far from extemporizing new laws, they preserved, in their reverence, even the least desirable attributes of the old, and have only just now reformed their system of procedure when we, their elder brethren, are confessing a like necessity and acknowledging the goodness of their example.

These were the principles which preserved them. Amid a variety of temptations, apparently infinite when viewed from this side of the Atlantic, but perhaps less serious when more closely contemplated, they have always acknowledged that private opinions must yield to the recorded will of society at large, and that no community can maintain a political existence where every citizen claims the right of promoting by violence his own speculative conceits.

We believe Mr. Webster was substantially justified in treating as already exploded the recent agitation for the dissolution of the federal union. There is, indeed, something so unprecedented in this enormous aggregation of states and territories that it is impossible to arrive at any probable conclusion respecting the future destinies of America. The weights on the two seaboard are now so immense that the constitutional fabric must needs be exposed to severance from its own gravitation alone. The thirteen states of the Union have already become three-and-thirty, if not more, for they increase as we write, and there is space and verge enough for converting the number into a hundred.

It is beyond all human power to calculate the prospects of a government to which one continent supplies territory and another population. What California is to America, America is to the whole world. No example has ever yet been seen of such a mighty and interminable conflux of peoples. Ireland alone supplies yearly to this extraordinary state the population of a first class city. San Francisco has increased more in two years than Brighton in fifty. The treasures of the new territory have attracted immigrants in equal numbers from the two proverbial extremities of the world—from China and Peru; and yet by some wonderful process the system of the union appears to absorb and assimilate to its constitution these various and conflicting elements. No speculator can prognosticate the end of such a prodigious experiment, or prophecy the eventual decisions of a chamber in which the delegates of California and New Mexico will meet the representatives of Florida and Maine. But thus much we may at least say, that the American Union is now discharging a providential part in the progress of the world, and that if the possible modifications of its political constitution are but effected in obedience to the principles which have hitherto maintained it, there can be no reason why either Americans or Englishmen need look with apprehension to the result.

From the Examiner, 4 Jan.

# FOREIGN POLICY IN 1851.

THE political doctors are for the most part optimist at present, and much more given to congratulate than lament. Whether this is owing to any conservative course which the upper currents of the world are taking, or whether it is that John Bull has lost a portion of his grumbling habits and gloomy temperament, we shall not say. But the fact, at least, is undoubted, that the bears generally carry the day against the bulls in the fluctuating tides and prospects of the world's political exchange.

There is truth on both sides, that is, there are causes both for rejoicing and regret. But we should say, at least as far as the continent of Europe is concerned, that the reasons for hope and satisfaction are latent, whilst those for disgust and regret stare the liberal in the face and startle him. There is nothing, first of all, so very encouraging in the state of France. The people, it is true, are not cannonading each other from either side of a barricade. Neither is there proscription, or famine, or civil war, or a government changed from day to day. But there are possessors of power who seem sadly uncertain what use to make of it; and they are constantly engaged in such unseemly squabbles for the most trifling affairs that their diurnal history resembles the petty chronicle of a nursery rather than the record of a great people. Let us imagine our sergeant-at-arms having got hold of a vagabond who avers that a conspiracy was got up by the court to blow up the House of Commons and assassinate the speaker. Imagine the same sergeant-at-arms, on hearing this, not going to the home secretary or the police office, but hiding his informer carefully in his own residence, and communicating to the speaker and the officers of Parliament the dire fate that awaited them. Imagine, again, the informer brought into court, interrogated, and found to prevaricate and to be at such utter variance with fact, that no earthly credit could be attached to him. And then suppose the sergeant-at-arms and the speaker still supporting this ruffian, defying the Home Office, and bearding the court. All this is too ridiculous for our friend *Punch*. And this is but the simple narrative of M. Dupin's and Commissary Yon's conduct.

The worst feature is, that France, lost in these puerile internal squabbles, no longer exercises her independent influence in Europe for the good and liberal purposes which might be expected of her. Since 1848, as well as before it, the influence of the Paris government has universally been exerted to retard rather than develop the progress of other countries toward free institutions. Whilst France exerts this evil influence by its direct policy, it works still greater evil by its example. For the aspect of a great country, thus torn asunder and nullified, dependent on half a million of soldiers for its public peace, and with the upper and lower classes in a state of temporary fever rather than

that of permanent understanding with each other—all this acts powerfully to deter other countries from even entering upon a constitutional course, and has given some show of reason even to the folly of reaction.

Beyond the borders of France we can imagine none who have any reason to be satisfied, save the holders of foreign stocks, the dependents upon courts, and the members of the Peace Association. Peace has certainly been preserved, but at the expense apparently of every other blessing that ennobles or establishes political society. Peace has been secured by Prussia's forsaking, even in outward appearance and profession, the constitutional and the German cause, and going over, with arms reversed and knapsack on shoulder, to the absolutist cause. This desertion, which might have been performed quietly and with some show of decorum in peace, has been performed by Prussia in the open field, at the head of an army and armed population, and as if there was some object in proclaiming to the world her signal dereliction.

It is now, however, of little import to inquire into the means or the manner. The fact is the chief point—the fact of Austria and Prussia being henceforth one, and having come to a full agreement to divide paramount influence over the rest of the German confederation, and to maintain that intact by a reestablishment of the old diet, but with a modification of its laws in their own favor. There is little doubt, for example, that they are to take the executive upon themselves. And as the only attribute of the executive will be to keep down movement, progress, or any inkling of innovation on the part of princes or peoples in the minor states, it is not difficult to form an idea of the new era that is opening for Germany.

If in all this there is cause for despair, there is also room for hope in the knowledge that there never existed such a combination of heterogeneous elements as Germany, in creeds, in interests, in popular tendencies, in views of princes, in the diversity of aristocratic, democratic, and bureaucratic parties. Even if the people themselves determine to be quiet, there will be quite enough of dissidence, intrigue, and struggle among the political classes to put the several powers at variance, and compel some of them, at least, to recur for succor to that political opinion which is now universally condemnatory of every act, and even of the whole race, of foreign kings and politicians. For a long period Germany can be little else than chaos, and the effort of the Great Powers is now to decree that this state of chaos shall continue to exist, and that it shall be called regularity and light. But that the chaos will evolve itself into creation, and by modes and in ways utterly unknown to, and inconceivable by, such folk as Manteuffel and Schwarzenberg, is also as evident as any fact in natural history.

As long as the great central question of Europe remains thus in abeyance, the people of minor countries must remain the same. They can only



hope for liberation when the German incubus is taken off them. Spain can only become a constitutional land when it has ceased to be an appanage of Bourbon princes and princesses. Scandinavian countries can only be free, and form a whole, when Russian despotism weighs less potently upon the Baltic. Nor can the Danube or the countries on the Black Sea be opened to commercial industry and political development until the great autocracies be melted down.

The great aim of parties who have any principles to uphold should be to display their wisdom and well working. Such is now the rapidity and facility of communication, that men's thoughts flow together and fuse by contact and conversation even more effectually than they used to do by the press. Vienna and Berlin are as closely connected as Berlin and Dresden were ten years ago. Warsaw itself has been more Germanized by its railroad than Russianized by the sojourn there of the czar's court. Hence certain operations of the mind, involving instructive comparisons, are going on at a rate of which none had a conception in the days of Metternich. An ill-managed, prodigal, and bankrupt despotism has no more chance, in such an age, of prevailing against a liberal and democratical government, than Islamism has of making converts in Europe.

We have ourselves a similar invasion to guard against. We are within ten days of New York, and must take care to keep and improve the many advantages we possess, if we are to resist the kind of war henceforward to be carried on amongst nations—the intellectual war of creeds, of prosperity, of improvement. Such will be the great rivalry of that latter half of the nineteenth century upon which we are entering.

From the Spectator.

#### TASTE IN MANUFACTURES.

MR. CORDEN has been sojourning in Manchester, and, in the early part of last week, attended a public meeting of the friends and supporters of the School of Design, and made a speech containing some observations of general interest on our relation to other countries as a manufacturing and mercantile people.

Referring to an observation by Mr. Brotherton, that he could never understand how it is we should not be equal to other countries in the taste of our productions as well as in their quality and their price, Mr. Cobden observed, "Nature has done so much for us, that we have, in an age when steam-power is the great element of productiveness, not felt the necessity of tempting our customers by superior taste. We had only to set our steam-engines, or shuttles, and looms, and four or five-colored printing-machines at work; and, if the taste of the article was not so good as it should be, the price would be so low that we should be able to sell pretty nearly all we could produce to almost all the people in the known world. But we must improve if we are to retain our customers. If ever we are to be made second-best in the world's race, it will be by our cousins on the other side of the Atlantic, who have coal and iron in a hundred

times greater abundance than we have—a little remote, indeed, from the sea-coast, and not so easily got at. But we must not despise the competition of the French, as manufacturers. They are very deficient in coal and iron, and they have not our sea-ports; but as manufacturers they are equal to any other people on the earth. If they had our natural advantages as manufacturers, the French would have done all that we have done. Take them in the weaving of silk, and look at their Jacquard loom. Take them as calico-printers—we derive almost all we know of calico-printing from them; we have scarcely a color which is not of French invention—scarcely any combination of drugs to produce a new effect, but we have borrowed it from the French. In taste we borrow implicitly from the French. We do not know what we should have to print, or what the ladies would wear, till we first find out what the French are preparing for the next spring. But the French cannot rival us as merchants. They have not the faith the English have. A Frenchman cannot send a cargo of goods to the West coast of South America, or China, consigned to a person he has never seen, and then go calmly to his country-house and wait there in perfect confidence that those goods will be disposed of profitably, and accounted for to him, and the ship return with another cargo, suitable for some different market. The French as merchants are narrow-minded and ignorant, but as manufacturers we cannot despise them. Now, by steam and quick communication, the world is rapidly advancing to that state in which, to find a consumption for our products, we shall require something else besides cheapness—superior taste." Comparing the kind of cottons now printed for and used by domestic servants and laborers' wives, with those used by the same class twenty years ago—comparing the combination of colors in these with the "common navy blues" of those—he declared, "the same process is going on all over the world, and in a few years we may expect to have the taste of almost the whole civilized world assimilated to that of France. Even the remote East, which has been stagnant in its mind for a thousand years, even the tribes of Central Asia, are now giving up the patterns they have used from time immemorial, and learning to adopt the superior taste of French fabrics."

If it were asked why the taste of Manchester had not improved, the reason would be seen in the absence of such an institution as this. Mr. Cobden referred to his personal acquaintance with the valuable effects on French design of the schools of design at Lyons and elsewhere. "It is well known among manufacturers generally, that it is the taste in ribands from which primarily all other tastes [respecting matters of dress] originate." He himself had been sufficiently acquainted with this matter, when engaged in the business himself, always to know that when he saw the ribands of the season he could get some idea of what the garments in fashion would be afterwards. In the dusty and smoky region of St. Etienne great attention is paid to taste in the production of ribands; and there is a school of design there. In Manchester there has been nothing of the sort; but now such an institution is rising up here—an encouraging proof that the necessity of improving the taste of articles is felt.

Mr. Cobden is more sure on the ground of political economy than he is on that of æsthetical economy, and when, in giving his counsel to the Manchester

School of Design, he tries to account for the inferior taste of the English in manufacturing productions, he seems to us to pass over the real and obvious causes in order to guess.

If man cannot by taking thought add a cubit to his stature, nor be comely at will, most assuredly he cannot be tasteful on the spur of necessity. The political economist speaks as if you could get some taste on demand, as you can order an engine or fetch up coals out of the mine. But the desiderated article is of slower and more capricious growth. Its distribution, like that of all other faculties, is natural as well as individual. If the Anglo-Saxon is paramount in commercial energy, he is fain to humble himself in borrowing patterns from France, he is quite proud if in singing he is taken for an Italian, and in sculpture he is ever vainly trying to be an ancient Greek. But he "cannot make a statue;" partly, no doubt, for want of certain born faculties. If he could cause himself to be begotten of some Hellenic line at Naples or Florence, or take his birth, at the tenth generation, in Dauphiny, there might be a better hope for his design on canvass or silk; but then he would not be an Englishman.

There is another obstructive cause well worth Mr. Cobden's attention. In matters that depend upon the feeling, there must be a considerable degree of spontaneity, or the thing will not be done well: and that is especially the case in works of art. Art must be cultivated by the student *for its own sake*, apart from its profit, or utility, or distinction; he may have all those things in his eye, but the motive, while he is at work, studying or executing, must be the artistic impulse for its own sake—otherwise the product will be heavy, mechanical, wanting in taste. It is the over-ruling sense of domestic necessities and commercial objects which deadens so much of our own art, even in the higher walks. Our dominant trading spirit is the very opposite of the artistic spirit, and checks the growth, as the engine-evolved atmosphere of carburated hydrogen would check the growth of flowers. As a striking illustration *à converso*, we might point to the sudden burst of artistic invention among our ladies—drawn to the pencil from sheer love of the work. If Mr. Cobden can teach Manchester men to love work better than pay, he will have put them in the way to acquire taste.

From the Spectator.

#### MERRYWEATHER'S LIGHTS AND SHADOWS OF THE OLDEN TIME.\*

THIS volume has the fault of an untrained or an ill-trained author—a little too much of writing, a little too finely done; and, on some points, the matter, if sufficient for the object, is drawn from sources that argue second-hand rather than original inquiry. The book, however, is pleasantly written; and it brings together a good deal of curious matter regarding the learning, the manners, the opinions, and the practices of the dark or middle ages. It will also fulfil its purpose of furnishing readers of a liberal curiosity, but who have little time to

spare, with an idea of the social state and condition of our ancestors, that they may learn to appreciate the comforts of the present by gaining a notion of the discomforts of the past.

The book consists of eighteen chapters or essays, on topics exhibitiv of English life from the time of the Saxons to that of the Plantagenets, though the author may occasionally diverge to a foreign country or come down to a later date. Some of the papers refer directly to literature or science—as the persecutions of the few early philosophers on the charge of magic; the rewards, by church preferment or direct patronage, which learning received in the dark ages; illustrations of the literary life and character, and the writings for the people in the form of ballads. Others relate to religion or superstition—as "the dangers and triumphs" of the Bible "in an age of gloom;" "a chapter on the history of relics;" the perils of heresy and unbelief; witchcraft and magic; miracles and mesmerism; with the history of leechcraft. Several of the essays describe manners and customs; "hearths and homes, or household comforts of old England;" mirth and jocularly by professional jesters in the court and the convent; marriage ceremonies, or rather the modes and law of marriage under the Anglo-Saxons. The subjects of the remaining essays are economical, historical, or miscellaneous. They relate to the influence of monastic communities on society and civilization; the state of the roads and the means of locomotion in the olden time; slavery in England, especially under the Saxons; the position and persecutions of the Jews; the corrupt character of lawyers, and the administration of law in Saxon and Norman courts; with the dawn of a new æra, when the minds of the people gradually awoke to the corruptions of the Church and the oppressions of the State.

A want of completeness in the treatment of many of the subjects is almost inseparable from the object of the writer, and the limited space to which his single volume confines him. With due allowance for this general fault, the papers have an interest pretty much proportioned to what might be expected from their titles. Slavery in England under the Saxons offers a more terrible moral picture than anything the Abolitionists could produce of West Indian slavery, and throws the strongest light possible on the barbarous feeling of the age; for the distinction of color, or even of race, was in this case wanting. The essay on the condition of the Jews in Norman England may add little to the general impression of their treatment, but it brings the particulars together; furnishing examples of fierce oppression, alternating with spoliation and cajolery, which leaves it very doubtful whether the Christian, in the long run and the large way of business, was not quite a match for the Jew in the arts of extortion. Henry the Third, though not ranking as a very able monarch, was quite able to spoil the Israelites, and in a way which reminds one of the frogs in the fable—sport to him. He elated the

\* Glimmerings in the Dark; or, Lights and Shadows of the Olden Time. By F. Somner Merryweather, Author of "Bibliomania in the Middle Ages," &c., &c. Published by Simpkin and Marshall.

Jews by summoning an assembly, which has been called a Parliament.

But if the Jews were desponding over the loss of their synagogue, [which had been seized and turned into a church,] they were elated in 1241 by a circumstance unparalleled in the whole history of our nation. In the twenty-fifth year of the reign of Henry III., a "Parliamentum Judaicum" was summoned at Worcester; the king issued writs, commanding the sheriffs to return from their towns the richest Jews as members. The day appointed by the Christian King was Quinquagesima Sunday; the Jews met to violate a Christian Sabbath by discussing pecuniary matters. When the king appeared before the Parliament, the feelings of exultation which the Jews had encouraged were speedily dissipated; it was the old story over again; the king wanted money; he had called them together merely to demand of them a trifle of 20,000 marks; half of this sum they were to pay into his exchequer by Midsummer, the remainder was required at Michaelmas. Although some delay occurred in gathering together this large sum, the king had faith in the resources of the Jews; the next year, wishing to repress the open discontent of the Welsh, he levied another tax of 8000 marks. In this instance no Parliament of Jews was convened; they were simply ordered to find the money, or submit to transportation to Ireland, in which case all their goods were to be confiscated to the king. During the next three years of Henry's reign these arbitrary measures were constantly resorted to by the king and his parliament; it was astonishing that they were able to meet such continual calls. Sixty thousand marks were paid by the Jews during that time.

The particulars about the Saxon laws of marriage are curious, and further illustrate the rudeness of that people.

By the Anglo-Saxon laws, every woman was under the care of some man, who was termed her mundbora, or guardian; and no one could marry her without having first paid a sum of money as a compensation to her mundbora. The father of course was the guardian of his unmarried daughters; the brother if the father died; and next to him the nearest male relative; if, however, the female was friendless and alone, she found in the king her legal guardian. There were no runaway matches, no clandestine and romantic nuptials, among the Saxon people; they did everything, even to their very love affairs, in a plain matter-of-fact way; they estimated the value of the maid according to her rank in life, and the law fixed the sum which should be regarded as a legal tender to satisfy the avarice of her guardians. The first step in courtship, therefore, was to buy the consent of the mundbora; the lover was then admitted into the society of his mistress, and allowed to claim her in due course as his wife; if, however, her personal charms or her disposition proved on better acquaintance unsatisfactory to her suitor, and he failed to complete the *bargain*, (we are using, fair readers, the terms employed by the Saxon witan,) he became immediately amenable to the law. For this breach of a promise of marriage, he had to pay not only the usual mund or consideration-fee to her guardian, but an additional compensation, besides a sum of money to those who had become sureties for the fulfilment of the agreement on his part. If a man ventured to marry without first having bought

and paid for his wife, he was guilty of the crime of mund-breach; the consequences of which were both disastrous and vexatious. The husband in such a case possessed no legal authority over his spouse; he was a husband, in fact, without a wife; he had no right to her property; he could recover no compensation for any insult which another man should dare to offer her; she had not been paid for, the guardian had received no consideration; and all damages or fines inflicted for such an insult were payable to the woman's mundbora. If a man wished to take his wife into a foreign part, or into another thane's land, he had to enter into a compact with her guardian that no wrong should be done to her, but that she should receive every mark of attention and kindness. If a man bought a maid and paid for her, no other could negotiate for her purchase; but if any fraud had been committed on her part, or on the part of her friends, she was returned home, and the man demanded back his money. By the Saxon law a maiden and a widow were of separate value; the latter could be purchased for one half the sum which the guardian of a maid was entitled to demand; the man, therefore, who could not afford to purchase a maid might, perhaps, be able to purchase a widow. The laws relating to the marriage of widows are curious, and seem to discountenance second nuptials. The widow was compelled, by a law of Canute's, to continue husbandless for twelve months at least; if she married within that time, she forfeited all her marriage-gifts, and all the property which she acquired by her first marriage was claimed by her nearest kinsman: Henry the First confirmed this decorous law.

The social and economical influence of monastic communities has been treated too often by writers of considerable ability to leave much for Mr. Merryweather to do in the space to which he is restricted, though we believe the subject to be worthy of a more elaborate and particular exposition than it has yet received. The dangers and difficulties of locomotion of yore furnish a very curious paper, full of curious facts.

The expense of conveying goods in those days was enormous; and the wagons and carts employed for this purpose were so clumsy and ponderous that they frequently, in wet seasons, sank deep into the road, and were immovable until hot suns imparted a degree of firmness to the swampy thoroughfare; inland trade suffered severely from these evils. Coals were dug at Newcastle as early as the year 1234; but the expense of transmission was so great that the Londoners were obliged to use wood and turf as fuel; about the same time the hire of a cart and three horses was fixed by law at fourteen pence a day, the wages of a dozen laborers; the cost of conveyance was enormously increased by the continual demands which met the traveller in the shape of tolls. The thoroughfares which intersected the lands of the barons, or those of the monks, could only be used by the payment of a toll—a system of taxation grievously out of proportion with the comforts of the road, but which formed sometimes a most important branch of revenue to both seculars and clergy; indeed, in the fourteenth century an exemption from pontage, a tribute demanded for crossing a bridge—from pavage, a toll imposed for repairing roads—and from murage, a duty levied for upholding walls—

were sometimes granted as inducements to attract foreign merchants into this country, or to encourage some particular branch of internal commerce. The expense was augmented by the time consumed in a journey. In a fortnight, the team of the Norwich carrier might hope to reach the metropolis; yet, perhaps, the team numbered half a score of sturdy cattle. It cost more to convey the produce of the North to the South of England than it did to export it into foreign parts. Pack-horses were the means of conveyance used by the more expeditious trader; and so great was their advantage over the clumsy and springless vehicles of the day, that not only the produce of the weavers but even the pottery of Staffordshire and the coal of Newcastle was conveyed by them. In imitation of the caravans of the East, merchants frequently travelled together from town to town, and fair to fair; they did so both for company and mutual protection; pilgrims followed the example, which materially relieved the severity of their pious penance. \* \* \*

The wet seasons were peculiarly unpropitious to travellers; they were sometimes delayed for a week by a fall of rain. Two Franciscan friars in the thirteenth century, within a mile or two of Oxford, to which place they were travelling, were unable to proceed because the floods were out and they ran many risks of perishing from the dangers of the road.

The state of the metropolitan streets, both in France and England, would have terrified a sanitary commissioner.

The public thoroughfares of the metropolis were unpaved, and were little better than the country lanes; the inhabitants, and even the butchers, threw the offal into the streets, and swine revelled unmolested in the gutters. In Paris, a French prince of the royal blood was killed by a fall from his horse, in consequence of a sow running between the animal's legs. An order was issued to prohibit them from wallowing in the muddy streets; but the order, it is said, excited the anger of the monks of the Abbey of St. Anthony, who, from time immemorial, had enjoyed the privilege of turning their swine into the public thoroughfares; the monks urged their plea with such pertinacity, that it was found necessary to grant them an exclusive right of sending their pigs about town without molestation, only requiring that the holy fathers should turn them out with bells hung round their necks. The swinish multitude grew fat upon the filth, and formed, with the kites, crows, and other ravenous birds, the only scavengers of the busy streets of Paris and London. There was a total absence of all sanitary regulations; indeed, the public thoroughfares became, in the absence of water-closets and drains, the common sewerage of the city. In France, the people were allowed to throw out of their windows into the streets filth of the most offensive nature, on calling out three times, "Gare l'eau!" The principal streets of Paris were not paved until the latter part of the twelfth century, and those of London not until a much later period; the traffic was comparatively so slight that the mud which collected in the uneven road proved no inconvenience to the shopkeepers; a pack-horse might now and then pass by, a gay and chivalrous knight might call the attention of the honest burgher, but vehicles were rarely used, and the bugle of the mail never enlivened the thoroughfares of the city. Holborn, the great artery of Modern Babylon, through which pour in

quick succession one loud, busy, rattling stream of life and commerce, was not paved till the commencement of the fifteenth century. Some of the minor streets were scarcely passable. Narrow lanes with hedges, broken only here and there by a straggling house, were the primitive Wood Streets, Gray's Inn Lanes, and Aldgate Streets, of modern times; some would venture to traffic them in the day, but few would risk such perilous thoroughfares at night. Some of the streets were so bad in the prosperous days of King Henry the Eighth, that they are described as "very foul, and full of pits and sloughs; very perilous as well for all the king's subjects on horseback as on foot." Along such dangerous paths the traveller at night had to grope his way about town in total darkness, except he was near enough to be guided by the lanterns on the steeple of Bow Church, which served as the only landmark to the bewildered stranger.

From the Examiner.

*Lyrics of the Heart; with other Poems.* By ALANIC A. WATTS. With Forty-one Engravings on steel. Longman and Co.

In every respect this is a beautiful volume—the poems are choice and spirited, and the engravings are of an order of merit to which the illustrated literature of the last dozen years has preferred little claim. They appear to have been executed before the days of cheap literature or "moon" stricken print sellers, and while employment of the highest art upon annual publications was justified by the amount of public encouragement awarded to them.

Among the painters who have contributed original designs to Mr. Watts' volume are Stothard, Barret, Boxall, Newton, Roberts, Danby, Howard, Uwins, Bonnington, Lawrence, Etty, Westall, Leslie, Bentley, Haydon, and Stanfield. Among the engravers are Greatbach, Watt, Goodyear, Portbury, Rolls, William Finden, Engleheart, Miller, Lewis, Wallis, and Willmore. Stothard's designs are exquisite examples of the delicate grace of outline, the beauty of composition, and more than Arcadian simplicity of fancy, which gave such extraordinary charm to even the very latest touches of the old man's pencil. Worthy of these in loveliness of landscape are the subjects from Barret, Roberts, Danby, and Stanfield. The view on the Rhine by the latter artist is as fine as one of the master-pieces of Turner's early style. Of the rest of the designs we like Howard's the least; but all have the merit of expressing the manner of the respective painters, and in the engraving have had fair justice done to them. It is also to be observed of nearly all the designs that they harmonize with the sentiment of the poetry they illustrate. We see that they have not been pressed into unwilling service or uncongenial companionship.

Mr. Watts modestly explains the origin of so ornate an edition of his poems. He says that having been for upwards of fourteen years intimately associated with many of our most eminent modern artists in the production of a series of



illustrated works, the agreeable nature of that intercourse led to a desire on his part to connect himself with them in some volume which should be composed wholly of his own writings. He might have enlarged on his own share in this intercourse with a just satisfaction and pride. To others it was largely profitable, if less so to himself. For several years the arts in this country had no promoter more enterprising, liberal, or intelligent than the author of this volume; and mainly we are indebted to such exertions and sacrifices (the one unhappily involving the other) for the extended and more successful efforts that have since outgone and superseded them.

This passage of the preface to the poems will have interest for many readers:—

Among the cordial and encouraging testimonies they have from time to time called forth, was one from the virtuous and patriotic statesman whose recent melancholy death has been so deeply and universally deplored; the more gratifying, because wholly unsought and unexpected by me. "It is not" (said the late Sir Robert Peel, in a letter which I had the gratification to receive from him in the year 1826) "from mere courtesy that I assure you that your name is respected by me. I have had the satisfaction of reading many of your poems. I particularly call to mind two—"The Death of the First-Born," and "My own Fireside;" to have written which would be an honorable distinction to any one." Eighteen years afterwards, his recollection of these poems induced him to place at my disposal a Treasury appointment for my son; and only a few months previous to his lamented death, I received an additional and unsolicited proof of the interest he continued to take in my welfare.

Of the contents of the volume Mr. Watts subsequently remarks that they assert no claim to the more exalted attributes of purely imaginative poetry. This is true in so far as the majority of them are strictly what the title describes them to be. But the heart has its imaginations too, and these of the most exalted and exquisite kind. Where its utterances in verse are true, indeed, there is nothing *more* true in the region of poetry—nothing that sinks more deeply into the memory, or leaves it so reluctantly.

Forgot his Epic, his Pindaric art,  
But still we love his language of the heart.

It is well to remember always, indeed, when we speak of poetry, that her greatest are often her simplest achievements. Her ways are very old and settled ways, not admitting, like steam or other wonderful inventions, of many novel or useful improvements. For though she has instructed and entertained the world for some thousands of years, we shall hardly err if we say that the first of her efforts whereof we possess written record continues to this day to be her best. And so we pay no ill compliment to Mr. Watts if we say that his verses are of what is usually called the old school—sensible, close, and spirited; full of feeling, truth, and tenderness.

Here is one—which many readers will recognize as an old and dear acquaintance:—

#### TEN YEARS AGO.

That time is past,  
And all its aching joys are now no more,  
And all its dizzy raptures. Not for this  
Faint I, nor mourn, nor murmur; other gifts  
Have followed, for such loss, I would believe,  
Abundant recompense. WORDSWORTH.

#### I.

Ten years ago, ten years ago,  
Life was to us a fairy scene,  
And the keen blasts of worldly woe  
Had seared not then its pathway green;—  
Youth and its thousand dreams were ours,—  
Feelings we ne'er can know again—  
Unwithered hopes, unwasted powers,  
And frames unworn by mortal pain:  
Such was the bright and genial flow  
Of life with us—ten years ago!

#### II.

Time has not blanched a single hair  
That clusters round thy forehead now;  
Nor hath the cankering touch of Care  
Left even one furrow on thy brow.  
Thine eyes are bright as when we met,  
In love's deep truth, in earlier years;  
Thy rosy cheek is blooming yet,  
Though sometimes stained by secret tears;—  
But where, O, where 's the spirit's glow  
That shone through all—ten years ago!

#### III.

I, too, am changed, I scarce know why;  
I feel each flagging pulse decay;  
And youth, and health, and visions high,  
Melt like a wreath of snow away!  
Time cannot sure have wrought the ill;  
Though worn in this world's sickening strife  
In soul and form—I linger still  
In the first summer month of life;  
Yet journey on my path below—  
O, how unlike—ten years ago!

#### IV.

But, look not thus; I would not give  
The wreck of hopes that thou must share,  
To bid those joyous hours revive,  
When all around me seemed so fair:  
We've wandered on in sunny weather,  
When winds were low and flowers in bloom;  
And hand in hand have kept together,  
And still will keep, 'mid storm and gloom;  
Endeared by ties we could not know,  
When life was young—ten years ago!

#### V.

Has Fortune frowned!—Her frowns were vain,  
For hearts like ours she could not chill;  
Have friends proved false!—Their love might wane,  
But ours grew fonder, firmer still!  
Twin barks on this world's changing wave,  
Steadfast in calms, in tempests tried,  
In concert still our fate we'll brave,  
Together cleave life's fitful tide;  
Nor mourn, whatever blast may blow,  
Youth's first wild dreams—ten years ago!

#### VI.

Have we not knelt beside his bed,  
And watched our first-born blossom die;  
Hoped, till the shade of hope had fled,  
Then wept till feeling's fount was dry?

Was it not sweet in that sad hour  
 To think, 'mid mutual tears and sighs,  
 Our bud had left its earthly bower,  
 And burst to bloom in Paradise!—  
 What, to the thought that soothed that woe,  
 Were heartless joys—ten years ago!

## VII.

Yes, it is sweet, when heaven is bright,  
 To share its sunny beams with thee!  
 But even more sweet, 'mid clouds and blight,  
 To have thee near to weep with me:  
 Then dry those tears, though somewhat changed  
 From what we were in earlier youth—  
 Time, that hath hopes and friends estranged,  
 Hath left us love in all its truth;—  
 Sweet feelings we would not forego,  
 For life's best joys—ten years ago!

We would gladly have quoted another—more recent in date, and in feeling, painful—but yet with a vigor and buoyancy of language which counteracts its despondency of tone, and is the welcome assurance of strength and hope unquenched and unabated. But our space will not permit of our extracting this, and we can but tell the reader who has the volume in his hand to turn to the verses entitled "Leaves from a Poet's Autobiography." We can borrow only one more extract, and for the subject's sake, not less than its simple beauty of expression, we take the poem—

TO CAROLINE BOWLES,

NOW MRS. SOUTHEY.

I know thee only in thy page  
 Of simplest truth, by taste refined;—  
 But though I ne'er have seen thy face,  
 Not seldom do I love to trace  
 The features of thy mind.

Pure as the calm, sequestered stream,  
 That winds its way through flowers and fern;  
 Now gliding here, now wandering there,  
 Diffusing coolness everywhere,  
 Refreshing all in turn:

So do thy strains, serene and sweet,  
 Well from their calm, untroubled shrine;  
 Winning their way from heart to heart,  
 And healing many a mourner's smart,  
 With balsam half divine!

What though I ne'er have clasped thy hand,  
 I see thee oft in Fancy's glass;  
 "Edwin" and "Ranger" in thy train,  
 Pacing across the village plain,  
 The "Broken Bridge" to pass.

And mark thy devious footsteps threading  
 The "Churchyard's" green and grassy rise;  
 Now, stopping by some fresh-made grave,  
 News of the timeless dead to crave,  
 To make the living wise.

Or by "the open casement sitting,"  
 With "autumn's latest flowers" before thee;  
 Drinking thy "Birdie's" merry notes,  
 Or tracking the sun as he proudly floats  
 To his haven of rest and glory.

And when gray Twilight weaves her web,  
 And the sounds of day-life melt away;  
 In "thy garden-plot" I see thee stand,  
 Watching the "night-stock's" leaves expand,  
 Or framing some soothing lay—

Some low, sweet dirge, of softest power  
 To stir the bosom's inmost strings;—  
 When friends departed, pleasures fled,  
 Or a sinless infant's dying bed,  
 Are the themes thy fancy brings.

O! much I love to steal away  
 From garish strains, that mock my heart;  
 To steep my soul in lays like thine,  
 And pause o'er each wildly-witching line,  
 Till my tears, unbidden, start.

For thou hast ever been to me  
 A gentle monitor and friend;  
 And I have gathered from thy song  
 Thoughts full of balm for grief and wrong,  
 That solace while they mend.

Hence, have I sought in simple phrase,  
 To give my gratitude a tongue;  
 And if one stricken heart I bring,  
 For comfort, to the self-same spring,  
 Not vainly have I sung.

Adieu! We ne'er may meet on earth,  
 Yet I feel I know thee passing well;  
 And when a pensive face I see,  
 Fair as my cherished thoughts of thee,  
 I'll deem it thine—FAREWELL!

The season has brought no gift-book more appropriate than these *Lyrics of the Heart*—no collection of pictures so rich, or of thoughts that ally themselves more truly to the graces and domesticities of Christmas. And after it has been turned over, page by page, at the winter fire, it may take its place on no unhonored shelf in the library. Mrs. Watts, we should not omit to add, to whom the volume is dedicated, has enriched it with some pieces that may compare with the best by her husband.

From Blackwood's Magazine.

## THE MESSAGE OF SETH. AN ORIENTAL TRADITION.

BY DELTA.

## I.

PROSTRATE upon his couch of yellow leaves,  
 Slow-breathing lay the Father of Mankind;  
 And as the rising sun through cloudland weaves  
 Its gold, the glowing past returned to mind,  
 Days of delight forever left behind,  
 In purity's own robes when garmented,  
 Under perennial branches intertwined—  
 Where fruits and flowers hung temptingly o'erhead,  
 Eden's blue streams he traced, by bliss ecstatic led.

## II.

Before him still, in the far distance seen,  
 Arose its rampart groves impassable;  
 Stem behind giant stem, a barrier screen,  
 Whence even at noonday midnight shadows fell;  
 Vainly his steps had sought to bid farewell  
 To scenes so tenderly beloved, although  
 Living in sight of Heaven made Earth a Hell:  
 For fitful lightnings, on the turf below,  
 Spake of the guardian sword aye flickering to and fro—

## III.

The fiery sword that, high above the trees,  
Flashed awful threatenings from the angel's hand,  
Who kept the gates and guarded :—nigh to these,  
A hopeless exile, Adam loved to stand 99  
Wistful, or roamed to catch a breeze that fanned  
The ambrosial blooms, and wafted perfume thence,  
As 't were sweet tidings from a distant land  
No more to be beheld; for Penitence,  
However deep it be, brings back not Innocence.

## IV.

Thus had it been through weary years, wherein  
The primal curse, working its deadly way,  
Had reft his vigor, bade his cheek grow thin,  
Furrowed his brow, and bleached his locks to gray :  
A stricken man, now Adam prostrate lay  
With sunken eye, and palpitating breath,  
Waning like sunlight from the west away :  
While tearfully, beside that bed of death,  
Propping his father's head, in tenderness hung Seth.

## V.

"Seth, dearest Seth," 't was thus the father said,  
"Thou knowest—ah! better none, for thou hast  
been  
A pillow to this else forsaken head,  
And made, if love could make, life's desert green—  
The dangers I have braved, the ills unseen,  
The weariness and woe, that, round my feet,  
Lay even as fowls' nets; and how the wrath  
Of an offended God, for blossoms sweet  
Strewed briars and thorns along each rugged  
path :—  
Yet deem not that this Night no hope of Morning hath.

## VI.

"On darkness Dawn will break; and, as the gloom  
Of something all unfelt before, downweighs  
My spirit, and forth-shadows coming doom,  
Telling me this may be my last of days—  
I call to mind the promise sweet (let praise  
Be ever His, who from Him hath not thrust  
The erring utterly!) again to raise  
The penitential prostrate from the dust,  
And be the help of all who put in Him their trust.

## VII.

"Know then, that day, as sad from Eden's home  
Of primal blessedness my steps were bent  
Reluctant, through the weary world to roam,  
And tears were with the morning's dewdrops blent,  
That 't was even then the Almighty did relent—  
Saying, 'Though labor, pain, and peril be  
Thy portion, yet a balsam sweet of scent  
For man hath been provided, which shall free  
From death his doom—yea, gain lost Eden back to  
thee.

## VIII.

"Although thy disobedience hath brought down  
The wrath of justice; and the penalty  
Are pangs by sickness brought, and misery's frown,  
And toil—and, finally, that thou shalt die;  
Yet will I help in thine extremity.  
In the mid garden, as thou knowest, there grows  
The Tree of Life, and thence shall precious,  
One day, an oil distil, of power to close  
Sin's bleeding wounds, and soothe man's sorrow to  
repose."

## IX.

"That promise hath been since a star of light,  
When stumbled on the mountains dark my feet;  
Hath cheered me in the visions of the night,  
And made awaking even to labor sweet;

But now I feel the cycle is complete,  
And horror weighs my spirit to the ground.  
Haste to the guarded portals, now 't is meet,  
And learn if, even for me, may yet be found  
That balsam for this else immedicable wound.

## X.

"Thine errand to the Angel tell, and He  
(Fear not, he knows that edict from the Throne)  
Will guide thy footsteps to the Sacred Tree,  
Which crowns the Garden's midmost space alone :  
Thy father's utmost need to him make known:  
And ere life's pulsing lamp be wasted quite,  
Bring back this Oil of Mercy;—haste, be gone;  
Haste thee, oh haste! for my uncertain sight,  
Fitful, now deems it day, and now is quenched in  
night."

## XI.

Seth heard; and like a swift, fond bird he flew,  
By filial love impelled; yea, lessened dread  
Even of the guardian Fiery Angel knew—  
And through the flowery plains untiring sped—  
And upwards, onwards to the river-head—  
Where, high to heaven, the verdant barriers towered  
Of Eden; when he sank—o'er-canopied  
With sudden lightning, which around him showered,  
And in its vivid womb the midday sun devoured.

## XII.

And in his ear and on his heart was poured,  
While there entranced he lay, an answer meet;  
And, gradually, as Thought came back restored,  
Uprising, forth he hied with homeward feet.  
Sweet to the world's gray Father, oh how sweet  
His coming on the nearest hill-top shone !  
For now all feebly of his heart the beat  
Returned; and of his voice the faltering tone,  
Meeting the listener's ear, scarce made its purpose  
known.

## XIII.

"Beloved father!" thus 't was through his grief  
Impassioned spake the son, "it may not be,  
Alas! that, for thy misery's relief  
Wells now the promised balsam from Life's Tree.  
And must I say farewell—yea, part with thee?—  
Droop not thus all despairing: breath may fail,  
And days and years and ages onward flee  
Ere that day dawn; but Thou its beams shalt hail,  
And earth give up its dead, and Life o'er Death  
prevail.

## XIV.

"Astounding are the visions I have seen :  
The clouds took shapes, and turned them into trees  
And men and mountains; and the lands between  
Seemed cities, dun with crowds; and on the seas  
Dwelt men in arks careering with the breeze;  
And shepherds drove their flocks along the plain;  
And generations, smitten with disease,  
Passed to the dust, on which tears fell like rain;  
Yet fathers, in their sons, seemed age grown youth  
again !

## XV.

"And the wide waters rose above the tops  
Of the high hills, and all looked desolate—  
Sea without shore! Anon appeared the slopes,  
Glowing with blossoms, and a group elate  
Eying an arch, bright with earth's future fate,  
In heaven; and there were wanderings to and fro;  
And, while beneath the multitudes await,  
Tables, by God's own finger written, show  
The Law by which He wills the world should walk  
below :

## XVI.

"And ever passed before me clouds of change,  
Whose figures rose, and brightened, and declined;  
And what was now familiar straight grew strange,  
And, melting into vapors, left behind  
No trace; and, as to silence sank the wind,  
Appeared in heaven a beautiful bright star,  
Under whose beams an Infant lay reclined;  
And all the wheels of nature ceased their jar,  
And choiring angels hymned that Presence from afar.

## XVII.

"And then, methought, upon a mountain stood  
The Tree, from which, as shown to thee, should flow  
That Oil of Mercy—but it looked like blood!  
And, to all quarters of the earth below,  
It streamed, until the desert ceased to know  
Its curse of barrenness; the clouds away  
Passed in their darkness from the noon; and lo!  
Even backwards flowed that brightness to this day,  
And, Father, showed me thee, encircled by its ray:—

## XVIII.

"It showed me thee, from whom mankind had birth,  
And myriads—countless as the sere leaves blown  
From wintry woods—whose places on the earth,  
Even from the burning to the icy zone,  
Were to their sons' sons utterly unknown,  
Awakening to a fresh, eternal morn:  
Methinks I list that glad Hosanna's tone,  
From shore to shore on all the breezes borne!  
Then, Father, droop not thus, as utterly forlorn;

## XIX.

"A long, long future freaked with sin and strife,  
The generations of the world must know;  
But surely from that Tree—the Tree of Life—  
A healing for the nations yet will flow,  
As God foretold thee."

"Freely then I go,  
For steadfast is the Lord his word to keep,"  
Said Adam, as his breathing, faint and slow,  
Ceased; and like zephyr dying on the deep,  
In hope matured to faith, the First Man fell asleep!

COMPARISON BETWEEN A BRITISH M. P. AND  
A MEMBER OF THE AMERICAN HOUSE OF REPRESENTATIVES, to account for the indifferent figure and character of the latter as seen at Washington. The reader will be reminded of Mr. Thackeray's manner; a model the writer of *Across the Atlantic* often has in his eye.—*Spectator*.

By becoming members of Parliament, we rise from our insignificance into public life; we become public men; we gain a locus standi, as well as a seat; it is our object to sit in the one, and to stand in the other, as long as we can. Our names soar up to the top of subscription-lists, with the two magical letters tied to the end of them like a tail. Good dinners are ours—not paid for by ourselves, but given us by people in Baker Street and Finsbury Square—and we like good dinners. Our appendage acts like Grimstone's eye-snuff upon the vision of some of our friends, who used always to be rubbing those organs with a pocket-handkerchief as we passed. They no longer rub them now; they see us. I should electrify my little chop-house in the Strand, where I now sit down to the joint without making any manner of sensation, if I were one day to stalk in as the Member for

Guttleborough. "Did you see that gentleman sitting at No. 7, sir?" the waiter would ask, as soon as I had left. "That is none other than Mr. Such-a-one, the Member of Parliament." And he would begin telling lies about me. These are the considerations which draw the sportsman from his hounds, the Scot from his manufactory, and the Irish prince (if he had his rights) from his mud castle, and pop them all down a heterogeneous mass within the walls of St. Stephen's.

In America, the case is entirely different. There, the rich merchant, or the barrister in good practice, or the man of wealth and influence, in such cities as New York, Boston, and Philadelphia, would by accepting a seat in the legislature be making as great a sacrifice for the good of his country as I should by refusing one for mine. To appreciate this, only consider the consequences which, in that great republic, accrue to the victim who suffers himself to be dragged down from private into public life. He leaves his comfortable house in New York, or his villa on the Hudson, the elegant society by which he has been surrounded, and (dearer than all) the privacy which he has hitherto enjoyed. What does he get in exchange? He is compelled to reside in a miserable, unhealthy, unfinished town, for nine months in the year, without any objects of interest around him, without recreations of any kind, without any society to speak of. He is forced to drop his "aristocratic" airs, and to stand up and drink a cocktail with any drunken constituent who pursues him to the bar of his hotel. He is forced to sit next to, and to converse familiarly with, persons whom he has hitherto only read of in newspapers and novels, as we read of the "Tipperary Boys"—savages from Iowa and Wisconsin, whom the unsettled populations of those districts have sent up to represent them—stump-orators, who have not won their places by underhand dealing, by bribery and corruption, but have rushed in upon their opponents, and gouged them, like men. When he goes back, he finds that his house is no longer his own. Nothing is his own. He himself no longer belongs to himself—he belongs to the people. All day long, he is employed in shaking hands with generals and judges, and other dirty persons. As for any credit attaching to the position of a member of the Lower House, I should think it must act rather as a bar to your introduction to decent society. You are a delegate, not a representative—a flunkey, not a man. A constituency of so many thousands meet and proclaim, by a majority of so many hundreds or thousands, that such and such are their opinions. "Now, then, who'll carry our opinions up to Washington! Come, the place is vacant. Who offers himself for the plush and shoulder-knot?" or, "Who'll be our errand-boy?" "Please, gentlemen, I will," cry half-a-dozen. Homer Smith, or Artaxerxes Brown, or Nahum Robinson, as the case may be, is the chosen one. "Now, sir, you go up and deliver this parcel; and mind what you are about, do you hear?" You have twenty thousand masters. You are a servant-of-all-work to a vast constituency, with every individual member ringing his bell for you at one and the same time. Respectable men will not, for the most part, accept this kind of position.—*Across the Atlantic*.

The *LIVING AGE* is published every Saturday, by E. LITTLE & Co., at the corner of Tremont and Bromfield Streets, Boston. Price 12½ cents a number, or six dollars a year in advance. Remittances for any period will be thankfully received and promptly attended to.